

JPRS-EEI-85-054

11 June 1985

# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS



FOREIGN BROADCAST INFORMATION SERVICE

#### NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

#### PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

11 June 1985

# EAST EUROPE REPORT

## ECONOMIC AND INDUSTRIAL AFFAIRS

### CONTENTS

#### BULGARIA

Report on Unsatisfactory Fulfillment of 1985 Quarterly Plan (RABOTNICHESKO DELO, 27 Apr 85) .....	1
Statistical Date	1
Comment Urges Order, Discipline, by Dimitur Deliyski	6
Economic Cooperation With Syria Reviewed (Dimitur Khadzhinikolov; IKONOMICHESKI ZHIVOT, 1 May 85)	8

#### CZECHOSLOVAKIA

Eighth CC CPCZ Plenum Details R&D Requirements (Ladislav Riha; PLANOVANE HODPODARSTVI, No 1, 1985) ....	11
Central Bohemia's Economy Reviewed by Sector (RUDE PRAVO, 23 Apr 85) .....	24
Absenteeism in Light of Statistics (SVET PRACE, No 5, 1985) .....	26
Geothermal Resources in Slovakia Need Developing (RUDE PRAVO, 16 Apr 85) .....	29
Soft Drink Consumption Has 'Adverse' Effect (RUDE PRAVO, 16 Apr 85) .....	30

#### GERMAN DEMOCRATIC REPUBLIC

Economic Growth Statistics Questioned (Gernot Schneider; DEUTSCHLAND ARCHIV, No 4, Apr 85) ...	31
---	----

#### HUNGARY

Trade With U.S. Discussed (Joseph F. Dennin Interview; HETI VILAGGAZDASAG, No 16, 20 Apr 85) .....	45
--	----

Hungarian-USSR Cooperation Program Until 2000 (FIGYELO, No 19, 9 May 85) .....	49
Reform Held Anti-Inflationary in Intent (Maria Petschnig; FIGYELO, No 15, 11 Apr 85) .....	63
Official on Plans for Income Taxes (Laszlo Antal Interview; HETIVILAGGAZDASAG, 20 Apr 85) .....	66
Enterprises' 1984 Performance Summarized (Gyorgyi Kocsis; HETI VILAGGAZDASAG, 20 Apr 85) .....	69
Association of State Farms Established (NEPSZABADSAG, 25 Apr 85) .....	74
Report on Annual Meeting of National Bank (MAGYAR HIRLAP, 2 May 85) .....	76

#### YUGOSLAVIA

Continuing Impact of High Inflation Analyzed (Branko Colanovic; NEDELJNE INFORMATIVE NOVINE, No 1789, Apr 85) .....	79
Economist Discusses Checking Inflation With Foreign Credits (Davor Savin; EKONOMSKA POLITIKA, 22 Apr 85) .....	85
Data on Kosovo Use of Investment Credits (JEDINSTVO, 17 Jan 85) .....	92
Iron, Nickel, Antimony, Other Ore Production, Reserves (PRIVREDNI PREGLED, 29 Jan 85) .....	97
Iron Ore .....	97
Nickel Exploitation .....	98
Antimony Production .....	100
Perisin Disputes Economist Bajt on Interest Rates (Ivo Perisin; DANAS, 9 Apr 85) .....	102
Development of Chemical Industry, 1970-1984 (Stjepan Levata, Zoran Popovic; CHEMISCHE INDUSTRIE, Feb 85) .....	109



BULGARIA

REPORT ON UNSATISFACTORY FULFILLMENT OF 1985 QUARTERLY PLAN

Statistical Data

Sofia RABOTNICHESKO DELO in Bulgarian 27 Apr 85 p 2

[BTA announcement by Committee for Social Information of the Council of Ministers of results of fulfillment of Unified Plan for Socioeconomic Development of the Country during first quarter of 1985: "All-Round Mobilization of Forces for Fulfillment of Tasks"]

[Text] The efforts of labor collectives and workers during the first quarter of 1985 were focused directly on fulfillment of the plan and of the tasks resulting therefrom.

The first-quarter plan was fulfilled under adverse natural and climatic conditions. After the dry 1984 a cold and long winter ensued in the first quarter of 1985. Precipitation in the form of rain and snow was insufficient. Water for power sharply declined. Unusual freezes frequently occurred. This adversely affected the power supply as well as certain other sectors.

A number of enterprises and economic organizations proved unprepared to meet these adverse conditions successfully and did not carry out timely necessary measures to overcome the difficulties that arose. Labor, technological and production discipline was not up to the necessary level in all cases. This hampered fulfillment of the 1985 first-quarter plan.

Social management agencies and production collectives took a number of measures to counteract the adverse conditions, as a result of which their effect was lessened.

Industry

The economic organizations and enterprises of industry in the first quarter of 1985 produced a total industrial output of 9,315,000,000 leva, constituting 97.2 percent of targeted expectations. The plan was overfulfilled as regards the production of a number of types of machines and certain other products. However, the plan for the production of electric power, certain ferrous metals and other important commodities was not achieved.

# PRODUCTION OF CERTAIN BASIC INDUSTRIAL PRODUCTS

Types of products	Unit of measurement	1st Q 85	1st Q 85 as percent of 1st Q 84
Electric power	1000,000 kWh	11,929	94.6
Coal--total extraction	1000 tons	8,089	98.7
Conversion pig iron	1000 tons	366	100.5
Steel	1000 tons	644	95.1
Rolled ferrous metals	1000 tons	752	89.4
Steel tubes	1000 tons	69	99.5
Programmed digital devices for control of metalworking machines	each	131	91.0
Minicomputer systems	each	57	132.6
Dial telephone exchanges	1000 lines	117	102.6
Micro electric motors	each	414,901	99.0
Package electric drives with high-torque electric motors	each	2,069	166.9
Power transformers	each	2,169	102.7
Cables	1000 m	16,070	98.0
Diesel internal combustion en- gines	each	10,501	131.2
Integrated machines	each	74	176.2
Lathes	each	1,045	76.1
Tractors	each	944	82.1
Combines	each	2,085	20.4
Trucks	each	1,314	81.8
Buses	each	619	98.3
Forgings and stampings	1000 tons	28	98.4
Electrotelphers	each	30,786	91.8
Battery-operated trucks	each	11,881	101.3
Motor trucks	each	8,681	120.0
High-voltage circuit breakers	each	730	86.1
Freight cars	each	262	27.5
Ships and vessels	each	6	120.0
Nitrogen fertilizers (100 percent nitrogen base)	1000 tons	207	93.6
Phosphorus fertilizers (100 percent P <sub>2</sub> O <sub>5</sub> base)	1000 tons	40	73.9
Chemical fibers and threads	1000 tons	26	97.9
Polypropylene	1000 tons	16	121.7
Polyvinyl chloride	1000 tons	25	101.7
Soda ash--98 percent commercially pure	1000 tons	223	70.3
Tires for trucks, buses, trolley buses and trailers	1000 tires	234	105.9
Bulk cement	1000 tons	638	46.1
Bricks	1000 bricks	162,260	65.2
Roof- and ridge-tiles	1000 tiles	6,505	99.0

[continued]

[continued]

Types of products	Unit of measurement	1st Q 85	1st Q 85 as percent of 1st Q 84
Cellulose--88 percent absolutely dry base	1000 tons	47	104.6
Paper	1000 tons	90	100.00
Plate glass--2 mm base	1000 sq m	6,179	97.2
Household glassware	1000 leva	10,376	96.3
Cotton and cotton-type fabrics	1000,000 m	82	92.4
Woolen and woolen-type fabrics	1000,000 m	9	96.1
Silk and silk-type fabrics	1000,000 m	9	95.9
Knit outerwear	1000,000 garments	13	99.2
Sewn goods	1000,000 leva	176	98.5
Shoes (excluding rubbers)	1000 pairs	6,405	95.4

New and improved industrial output worth 931 million leva was produced, which was 6.3 percent more than planned.

#### Capital Investment and Construction

For further development and improvement of the physical production base of the national economy 962 million leva of capital investment was taken down during the first quarter of 1985. The vast part of the funds was channeled into physical production sectors, mainly for the solution of raw-material and energy problems of the national economy and for the introduction of the achievements of scientific and technical progress.

During the first quarter the state target for capital assets put into operation was 3.3 percent unfulfilled.

Construction and installation organizations did 642.5 million leva of construction as main contractor, which is less than planned and less than the first quarter of 1984. Completed construction of underway projects as well as the building of new housing units by state and cooperative-group construction was below the level of the corresponding 1984 period.

#### Agriculture

Agricultural organizations seeded considerably greater areas to early spring crops (barley, oats, lentils, alfalfa, early potatoes, onions, etc.) than in the same 1984 period. Larger areas were seeded to vegetables and early potatoes on private plots, too.

During the quarter animal husbandry output in agricultural organizations for the country as a whole was 1.6 percent less than in the first 1984 quarter.

Less meat and milk were purchased than in the first 1984 quarter.

The total number of cattle, including cows, in agricultural organizations was almost at the level thereof as of 1 April 1984. The number of swine for the country as a whole declined 1.9 percent, of poultry 2.2 percent, of sheep 3.7 percent.

#### Transportation and Communications

In transportation, results were higher than targeted in a number of technical and economic indicators. In comparison with the first 1984 quarter, truck-kilometers increased 0.3 percent and the empty runs of freight cars declined 2 percent. There was an increase of 1.4 percent in the technical readiness of freight trailers, of 6.3 percent in the use of their carrying capacity.

Common-carrier transportation hauled less freight and 0.5 percent more passengers than in the first 1984 quarter.

The postal network was expanded by 12 new PTT [posts, telegraphs, telephones] stations. Some 31,373 telephone stations were installed, including 24,701 for home use. One radio transmitter and 12 television retransmitters came into service.

The revenues realized by communication services were 6.3 percent more than in the first 1984 quarter.

#### Foreign Economic Relations

In the first 1985 quarter the participation of the Bulgarian People's Republic in the international division of labor continued to gain ground. The trade realized during the first 1985 quarter was 5,458,000,000 foreign-exchange leva. The established trends towards a change in export structure were preserved. Exported production-type machinery and equipment accounted for about 50.8 percent of total export volume.

Our foreign trade relations developed most favorably with the socialist countries, and first and foremost with the USSR. The share of trade with these amounted respectively to 76.5 and 58.2 percent of our total trade.

#### Living Standard of Population.

The domestic market was supplied with the necessary quantities and diverse mix of consumption goods.

#### FOODSTUFFS FOR DOMESTIC MARKET

Item	Jan-Mar 85
	as percent of Jan-Mar 84
Sugar	102.0
Rice	111.6

[Continued]

[continued]

Item	Jan-Mar 85
	as percent of Jan-Mar 84
Meat	95.0
Cheese--total	96.1
including sheep's milk cheese	110.2
Kashkaval [yellow cheese]	117.4
Milk	96.2
Eggs	105.1
Baby foods	105.2
Edible vegetable oils	99.9

The volume and percentage of new and high-quality products continued to increase.

Goods turnover in the amount of 3.1 billion leva was sold through the retail trade network and public food service establishments.

Work continued to expand the range and improve the quality of domestic services. The rate at which certain types of services were developed is inadequate and does not fully meet the increased needs of the population.

The results of plan fulfillment during the first quarter show that during the coming months and quarters of the year there must be an all-out mobilization of the efforts of enterprises, economic organizations, ministries and departments in order to overcome the lag and ensure the average rate of growth and development of the economy targeted for the year by the plan. There must be especially large-scale and effective efforts to decisively increase the social productivity of labor on the basis of significant savings of energy, raw and other materials and live labor and on the basis of the application of the achievements of scientific and technical progress. Fuller use must be made of production capacities, of fixed and working capital. Great care must be taken to raise quality and to update and improve the product that is turned out. Attention must be concentrated also on the fulfillment of targets in the production of goods in kind. In this regard it is important to give special care to the fulfillment of specified and agreed-upon subcontracted deliveries. Opportunities and latent reserves over the entire front of socioeconomic development must be discovered and their active practical utilization organized.

Further intensification of initiative, activity, organization and discipline on the basis of the decisions of the February plenum of the BCP Central Committee will contribute to the all-out fulfillment of the tasks targeted by the plan for the year.



## Comment Urges Order, Discipline

Sofia RABOTNICHESKO DELO in Bulgarian 27 Apr 85 p 2

[Article by Dimitur Deliyiski: "Strict Organization, Order and Discipline Are Necessary"]

[Text] The report, published today, of the Committee for Social Information of the Council of Ministers on the results of the fulfillment of the Unified Plan for the Socioeconomic Development of the Country during the first 1985 quarter indicates that the efforts of labor collectives and workers were focused on fulfillment of the plan and of the tasks resulting therefrom.

Despite the difficulties involved in the production of a number of types of machines and certain products the plan was overfulfilled. This is a significant point which suggests that wherever efforts are made to uncover additional resources--both materials and labor, wherever an orderly organization conformable to objective conditions is set up, the results there are good. As a rule, the enterprises that finished the quarter successfully made wise use of two- and three-shift work and created conditions for the normal course of the production process during the period when the routine of electric power use permitted this.

There are many reasons, however, why a number of sectors and subsectors of the national economy did not wind up the first 1985 quarter successfully. Adverse natural and climatic conditions, the drought and the cold and long winter during this period led to serious difficulties. Certain basic indicators of the plan, especially in power supply, were not achieved and these had a chain effect on the other branches of physical production. The lag in the construction sector and in metallurgical production is alarming.

A number of measures by social management agencies and production collectives to counteract the adverse conditions inspired sound effort. Quite a few enterprises and economic combines did considerable organizational work and adopted compensatory programs to overcome the lag and achieve the indicators in the annual plan.

Main efforts now must be directed towards a speedy regrouping of forces and towards the most effective use of existing reserves. Every enterprise, every economic organization, ministry and department can make up for the shortfall if it concentrates its work on tasks involving fulfillment and overfulfillment of the labor productivity plan on the basis of significant savings of power, raw materials, supplies and live labor. Significant reserves are embodied in the skillful use of production capacities, of fixed and working capital. Our national economy has a mighty production base, which in value exceeds a hundred billion leva. But a full work load on machinery and equipment is possible only with strict scientific organization of the production cycle. The results of plan fulfillment both in kind and in quality must become the gauge for the evaluation of everybody's labor--from workman to highest ranking executive. There are no other criteria now except to produce more goods with higher technical parameters, with higher reliability, with improved design.

Without a doubt the entire organizational work must be based on the tasks set by the February and March plenum of the BCP Central Committee. Accelerated introduction of the results of the scientific and technical revolution is a factor which we must make the main instrument for fulfillment of the plan and for successful completion of the year and of the 5-year period as a whole. The counterplans of the labor collectives comprise more than 5400 scientific and technical topics and targets with a possible economic effect of over a billion leva. But we must under no circumstances permit their implementation to take place, as in many places now, in the second quarter and even in the last quarter. On realistic evaluation of the possibilities, conditions must be created for the introduction of most of these to begin this very day, here and now.

Only thus will we create the fullest preconditions for overcoming the lag that has occurred and for successfully achieving the assigned goals.

6474

CSO: 2200/148

BULGARIA

ECONOMIC COOPERATION WITH SYRIA REVIEWED

Sofia IKONOMICHESKI ZHIVOT in Bulgarian 1 May 1985 p 8

[Article by Dimitur Khadzhinikolov: "Long-Term And Mutually Beneficial Cooperation"]

[Text] Trade and economic relations between Bulgaria and Syria have been developing steadily for more than three decades. They are built upon a solid contractual and legal foundation which includes a trade agreement, an agreement to develop economic, scientific and technological cooperation, a protocol which provides general directions for the creation of joint ventures and a series of other intergovernmental agreements. The joint Bulgaro-Syrian committee for economic, scientific and technological cooperation plays an important role in the realization of mutual ties. Of utmost importance in the development of Bulgaro-Syrian relations were the meetings and discussions of our first party and state leaders during the visits of Comrade Todor Zhivkov to Syria in 1972 and 1980 and of President Hafez Hassad to Bulgaria in 1974 and 1981.

Counter trade between Bulgaria and Syria has shown constant growth and reached 32 million leva in 1983. Our country exports to Syria lathes, drills, steel, calcinated soda, nitrogen fertilizers, various types of foodstuffs, and imports mainly cotton, phosphates and some other types of raw materials. During recent years, Bulgarian export of complete installations to Syria has increased: geological prospecting, designing and other engineering services for production purposes.

Mutual ties are developing successfully in a number of economic areas. For example, in the mining industry, Bulgargeomin and some of our other enterprises render aid to Syria by working large beds of phosphates and natural gas. Near Dzhibisa our specialists are participating with their Syrian colleagues and specialists from the USSR in prospecting and exploiting extensive strata of gas. Cooperation in this field will ensure not only the necessary supplies of raw materials for the development of the energy and chemical industries in Syria, but also expansion of the country's export potential, which will reflect favorably on trade and economic ties between Bulgaria and Syria.

Cooperation in the field of agriculture has been particularly successful and perspective. Our specialists have made their contribution to the construction of a number of dams, irrigation systems and agroindustrial complexes in Syria.



It is a well-known fact that "Agrokomplekt" fulfils its contractual obligations to the letter. Under the terms of the protocol for the development of agricultural ties, which was signed in February 1983, a joint production venture will be established.

Other areas which present opportunities for the development of economic cooperation between Bulgaria and Syria include the food and tobacco industry and light industry. A number of projects have been constructed with the participation of specialists from the People's Republic of Bulgaria and using Bulgarian machinery and equipment. These include silos and wine cellars in Sueda and Homs, refrigerated warehouses, companies for the fermentation of tobacco and other goods, which are intended not only to satisfy the internal market but also to expand the country's export list. It must be stressed that the successful development of the Syrian food and tobacco industry and light industry have also created the opportunity to expand the import of a number of finished goods manufactured in Syria.

Joint efforts are underway in the energy field to build new substations, traffic signals and power lines in Syria. Bulgaria is supplying installations and specialists for the construction of a factory for electric motors in Syria and, in cooperation with companies from other socialist countries, for the construction of three cement factories.

Scientific and technological cooperation plays an important role in the system of trade and economic ties between Bulgaria and Syria. Bulgarian specialists are working in fields, factories and hospitals in Syria, they are aiding in the construction of civil and agricultural projects, in the all-round development of entire regions and in the exploitation of natural resources. At the same time, many young Syrian men and women are being trained in our country. Bulgarian students are studying in Syria and our teachers and specialists are being sent to become acquainted with the rich ancient culture of the Syrian people.

The ninth regular session of the joint Bulgaro-Syrian committee for economic, scientific and technological cooperation was held last September in Sofia. These sessions provide a regular stimulus for bilateral relations. It can be said that the measures outlined were conducive to the expansion and intensification of economic ties in the perspective areas of both countries, and to the use of new and modern forms of cooperation. All this provided a positive reflection on the structure of counter-trade and created the prerequisites for the further development of mutually beneficial relationships.

An exceptionally important moment in the future development of economic cooperation was the official friendly visit to Syria of the General Secretary of the Central Committee of the Bulgarian Communist Party and President of the State Council of the People's Republic of Bulgaria, Todor Zhivkov. The visit took place at the end of April at the invitation of the General Secretary of the Arab Baath Socialist Party Baas and the President of the Syrian Arab Republic Hafez Hassad.

The meetings and conversations between the two first party and state leaders, which have become a solid tradition, have always been exceptionally fruitful. And so it was this time. The way in which joint efforts had achieved the expansion and intensification of economic ties was particularly valued. With this in mind, and taking into consideration the fact that the opportunities have not been exhausted, the two leaders outlined the directions of future development. New and wider horizons have been revealed for fruitful Bulgaro-Syrian economic, scientific and technological cooperation and for the enrichment of bilateral reciprocity.

12907

CSO: 2200/149

CZECHOSLOVAKIA

EIGHTH CC CPCZ PLENUM DETAILS R&D REQUIREMENTS

Prague PLANOVANE HODPODARSTVI in Czech No 1, 1985 pp 13-22

[Article by Docent Eng Ladislav Riha, Doctor of Science, Czech Commission for R&D and Investment Development: "The Expansion and Implementation of R&D Progress"]

[Text] In conjunction with the strategy of increasing intensification and improving the effectiveness of economic development and the quality of all work, the 16th CPCZ Congress placed, given the more demanding conditions of the 1980s, even greater emphasis on the expansion and utilization of research and development. The general secretary of the CPCZ Central Committee and president of the republic, comrade Gustav Husak, announced at this congress that the determining factor in intensification and the most potent source of increased labor productivity is R&D progress, and that the implementation of R&D progress is a truly revolutionary task for our society.

Resolutions of the Eighth CPCZ Central Committee Plenum and Their Implementation

The role of R&D progress and the more rapid utilization of R&D findings in practical situations was further emphasized at the Eighth CPCZ Central Committee Plenum. Presidium member and CPCZ Central Committee secretary, comrade Jakes, stated at this plenum that "When assuring the resolutions of the 16th Congress in the area of research and development we must base our actions on the fact that R&D progress is a complex process which normally requires significant public resources. When implementing these findings we must be cognizant of our potential, aware that everything cannot be resolved at one time and that we must set gradual objectives for ourselves. This means being aware of the major aspects of a problem and setting ourselves tasks which may be implemented immediately, as well as tasks which require greater concentrations of resources and which may be implemented at a later date. Therefore, to assure the rapid practical implementation of R&D findings we must adopt both short term measures, the effectiveness of which will be evident before the end of the current 5-year plan, as well as other longer term measures closely linked to the preparation and assurance of the Eighth 5-Year Plan.

This is primarily a matter of:

--the formulation and execution of a unified state R&D policy;

--the establishment of basic objectives and focal points of R&D expansion within the Czechoslovak national economy;

--the intensification of economic integration and R&D cooperation with CEMA member countries, and especially with the Soviet Union;

--the assurance of greater working efficiency for the research and development base and its integration into our developmental requirements;

--the expansion of creative worker initiatives.

In addition it is essential to increase the sophistication of central management and planning and to generate effective pressure on economic production units [VHJ] and enterprises while at the same time developing conditions that will enable them to utilize fully R&D progress and, with this as a base, to implement an intensification and increase in the effectiveness of production and the quality of all work.

The persistence with which the problems related to accelerating R&D progress have been analysed attests to the efforts of the party to provide for an effective expansion of the production-technical base of the Czechoslovak economy through intensification and more substantial contributions by R&D findings to this sphere, i.e. to machinery and equipment, technologies, the materials base, organization and management. The Eighth CPCZ Central Committee Plenum called further attention to the pressing need for assuring an ongoing increase in the use values of final production as a further fundamental aspect of increased production efficiency.

The upcoming period of national economic development requires that R&D work for the remainder of the Seventh and the Eighth 5-Year Plan be oriented primarily to work on those programs which play a key role in the process of intensifying the Czechoslovak economy. Ten fundamental directions have been outlined in this regard.

Implementing the resolutions of the Eighth Plenum, and the assurance of its specific tasks at present is requiring the full attention of all state, economic, public, and party agencies at all organizational levels. It is a positive development that individual ranks of management have approached the assurance of the tasks facing them in differing ways according to their authority, jurisdiction, and professional focus.

The enterprise sphere, for example, within the context of the technico-economic developmental strategy for individual sectors, has focused its attention on questions of production innovation, upgrading production programs, and product quality, all in line with the major objectives of state R&D policy. The attention of the upper management of enterprises and VHJ has thus become directed mainly to innovations in production programs, which will be required both for increasing export production and for improving performance in the satisfaction of consumer needs. This focus of innovative activity has resulted from a need to increase the use values of our products while at the same time reducing the materials and energy intensiveness of their production and operation.

The thorough and comprehensive expansion of such an important and economically critical program as the accelerated practical implementation of R&D Findings cannot succeed without an increase in the role of central agencies in facilitating the fulfillment of the above objectives in the most efficient and rational manner possible. Specific sectors have adopted, in conjunction with nationwide objectives of R&D policy and under the coordination of the newly formed commission for R&D and investment development, internal development programs that reflect the specific conditions prevailing in their sectors.

Planning commissions, commissions for R&D and investment development, and the Czechoslovak Academy of Science [CSAV] all have an important role to play in the implementation of the 10 strategic objectives for R&D and in the assurance of extrasectoral systemic measures. These primarily consist of the drafting and quality formulation of:

--aggregate predictions for the scientific-technical, economic and social development of the CSSR for a 20-year period, with the CSAV as the coordinator;

--fundamental objectives for the economic and social development of the CSSR for 1986-1995, which is being prepared under the guidance of the State Planning Commission;

--a Comprehensive Program of R&D Progress for the CEMA Member Countries for the next 15-20 years.

The systemic measures adopted on the basis of the resolutions of the Eighth CPCZ Central Committee Plenum by the governments of the CSSR, CSR and SSR focus mainly on:

--the assurance of the basic objectives of R&D policy, improving the plan for technical development and the formation of the conditions for accelerating the innovation process and the integration between R&D efforts and capital investment;

--methodological and legal adjustments to the planned management of R&D, international cooperation, and the organization of the research and development base.

All adopted measures at the present time are being implemented intensively and comprehensively at all levels, from central agencies down through research institutes and V&E. A number of shortcomings in the practical implementation of R&D findings are now the object of short term measures which must be implemented even in the final year of the current 5-year plan, while long term measures connected with prospects for future development will be worked on in the period covered by the resolutions of the Seventeenth CPCZ Congress.

#### Objectives of the Eighth CPCZ Central Committee Plenum and Role of R&D Expansion Plan

The Eighth CPCZ Central Committee Plenum, which was devoted to the accelerated practical implementation of R&D results, analyzed the problems of R&D work with



the objective of fostering the further development of the Czechoslovak economy by facilitating more significant contributions from R&D for all sectors and branches of the national economy. It was pointed out that the basic preconditions have been developed in the national economy for R&D progress. A number of measures have been introduced to strengthen the production and technical base of industry, agriculture, construction, and other branches of both the production and nonproduction spheres. The level of production mechanizations and automation has also increased. Industry has introduced a number of new areas of production which has made it possible to implement certain progressive structural changes. The potential for basic and applied research and development has been increased. All branches of the national economy have at their disposal research institutes and development worksites. At present about 190,000 individuals are employed in research and development, some of whom have a college education.

Developments in recent years have been characterized by a further expansion of R&D cooperation, especially with the Soviet Union. The high technology sectors are of increasing importance. These include computer technology, nuclear power, microelectronics, robotics, etc., all of which contribute to the accelerated mastering of tasks in this area.

The resolutions of the Eighth CPCZ Central Committee Plenum may be summarized in the following 3 requirements:

--the assurance of the multilateral practical implementation of R&D results along with broadly intensified production, the introduction of less materials and energy intensive technologies, the acceleration of innovation, and an increase in the technical sophistication and quality of products;

--the achievement through R&D of higher valuations of fuel, power, raw materials and materials and to assure further labor productivity increases;

--increasing the output and utilization of existing capital assets while at the same time providing for their reconstruction and modernization.

The broad based development of innovative activity is of great importance for the fulfillment of these requirements. It will be necessary therefore to use to a greater extent than ever before all of the potential resources available to the Czechoslovak economy for R&D, the results of the discovery and improvement movement, the possibilities for the comprehensive dissemination of progressive finds, foreign licenses, and the like. To sum up, the objective is to utilize fully what we have at our disposal, and to implement quickly all measures that produce the desired impact.

R&D progress is a complex process. When utilizing it one must bear in mind the fact that everything cannot be resolved at once and set gradual objectives. One must be able to break down complex problems into their constituent parts and then set objectives which may be implemented immediately as well as those which require the mustering of greater resources and which therefore must be undertaken in the future. For this reason the Eighth CPCZ Central Committee Plenum required that the assurance of the rapid practical implementation of

the results of R&D be accomplished both through short term measures, the impact of which will become evident during the current 5-year plan, as well as through certain more basic, long term measures.

The basic material orientation of research and development has been formulated already in the above mentioned 10 basic principles. Their significance lies mainly in the fact that they:

--link R&D progress with the work on the main issues of economic development. These include beginning the production of less energy intensive types of products, achieving higher valuations of raw material and material resources, and increasing self-sufficiency in food production. The consistent focusing of research and development on these areas should lead not only to improved resource management, but also to reduced demands for imports; this is another reason why the implementation of resource conserving measures is of critical importance, and has far-reaching economic consequences;

--focus research and development efforts on the application of state of the art technical disciplines such as microprocessor and microcomputer technology, the development and utilization of industrial robots and manipulators, the development of biotechnology, genetics and the like. A gradual change in the structure of production is predicted with this as its objective, and concentrated mainly in the fields of general engineering, electronics and chemistry;

--attempt to apply the findings of R&D to areas directly influencing the health of people, and the preservation and improvement of the environment; in particular they involve developing the conditions for overall public health and a reduction in the negative impacts of industrial processes, especially in highly industrialized areas.

The resolutions of the Eighth CPCZ Central Committee Plenum also relate heavily to the investment sphere. The increased value added and technical sophistication of machinery, equipment and consumer goods must become critical in the near future in evaluations of production efficiency. In the past our industrial sector has underestimated these considerations and devoted more attention to technical innovations, i.e., specific tasks to reduce production costs. Although we do not want to juxtapose the production and technology spheres of innovative activity, we must bear in mind that specific products should always be of the greatest importance. The product itself should be the critical determinant for the implementation of technical innovations as well. This is the greatest change required in the attitude towards R&D of enterprises and VHJ.

The issue of the efficiency of the Czechoslovak economy is also related to the requirement for focusing investment policy. There are two fundamental issues here:

--instead of pressure for new investments, we must adopt a policy of the modernization and reconstruction of existing facilities, employing R&D findings to the greatest possible extent;

--As important as the contribution of new production facilities will be, the technico-economic upgrading of the existing production base, its production capacity, productivity, and ability to produce products of high technical sophistication, will be of critical importance in the shift to an intensive mode of national economic development.

It is also important that facilities not be built which are inefficiently designed or inappropriate to our needs. This requires that the quality of the investment management process be improved, including investment documentation. Experience has shown that top priority must be accorded to pre-design, investor, and site preparation and to the lining up of contractors for a given project.

The Eighth CPCZ Central Committee Plenum emphasized that the sophistication of the work of all levels of management must be improved if changes are to be made successfully in the application of R&D findings. The ministries are to play an increased role in the new concept of authority and responsibility for R&D progress and capital investment in specific production sectors and divisions. They will be required to be involved in all tasks related to R&D work and to exert effective influence on the application of R&D results. Improving the management of R&D at the sectoral level should be achieved through better cooperation and coordination of the work of sectoral organizational entities and central agencies.

The activity of central organs related to technology has also been reevaluated and the decision made to form from the current Federal Ministry for Technical and Investment Development and the Ministries of Construction and Technology of the CSR and SSR a Czech and Slovak Commission for R&D and Investment Development. This creates collegial agencies composed of representatives of the managerial sphere, research, design, colleges, and economic practice, just as is the case with planning commissions. These agencies will be responsible for the formulation of a unified state R&D policy, will contribute to the more effective practical implementation of the results of R&D, and assure selected aspects of investment policy.

The basic goals of the commission may be characterized as follows:

--assuring the formation and implementation of a state R&D policy, primarily by means of a plan for the expansion of R&D and through the management of the R&D base;

--contributing to the formation and implementation of a state investment policy, including comprehensive housing construction, primarily by means of territorial planning, investor and design preparation, construction standardization, expert evaluations of construction documentation and the monitoring and evaluation of project implementation;

--managing the overall activity of state administration in the area of territorial planning and the construction code, and overseeing the further development of architecture and urbanism;



--developing techniques of design and relationships in construction preparation, and managing design activity.

In the activity of the commission great importance is placed on the development of R&D cooperation with the countries of the socialist community, especially with the Soviet Union, with nonsocialist states, and the expansion of technical assistance to third world countries.

In addition to handling these tasks and activities the Commission for R&D and Investment Development will also concern itself with specific developmental tasks in an attempt to assist in their resolution, whether through the inclusion of research tasks in the state plan for R&D or by pushing through the implementation of R&D projects in the national economic plan. The Commission will also work on a number of systemic measures and methodological regulations from the area of R&D progress and capital investment. In some instances it will initiate a modification of legal regulations, in the event that they are inappropriately formulated and are difficult to administer.

The activity of VHI and enterprises should be focused above all on the implementation of R&D results. The Eighth CPCZ Central Committee Plenum designated the enterprise sphere as the main implementation agent in this regard. The general secretary of the CPCZ Central Committee and President of the republic, comrade Gustav Husak, said in his speech: "Economic production units today represent large economic complexes which as a rule have at their disposal the requisite research, development, design, technological and engineering potential, the requisite material-technical base, a qualified labor force... Therefore we must also consistently demand from them social responsibility for the application of R&D findings."

As we have already noted, great emphasis has been placed on the development and implementation of the critical objectives of intensification and R&D progress, which are important from the viewpoint of structural changes and a substantial increase in the technical sophistication of the national economy. Their assurance is now the focus of several critical tasks of the 1985 R&D plan.

For instance, the state implementational plan for technical development in 1985 contains about 300 tasks from the realm of state programs, a number of which have been designated specifically by the government as binding tasks of the state plan for technical development. At the same time most of them are focused on the scientific and technical assurance of state priority programs. The basic document for their formulation was the government-approved 5-year state plan for technical development 1981-1985, and the requirements for this sector that resulted from the resolutions of the 16th Congress of the CPCZ and the Eighth CPCZ Central Committee Plenum, along with the guidelines for the Eighth 5-Year Plan.

The plan also incorporates the results of actually conducted inspections which were carried out for most state tasks of a production and technological character, and concentrated on:

--increasing the planned aggregate economic effectiveness of tasks being worked on as part of the state plan;

--increasing the scope of implementation;

--the reworking of planning documents - implementational outputs from the user sphere for the implementors in such a way that they may be included in the national economic plan.

This inspection had a highly positive influence on the 1985 plan, in conjunction with requirements for the integration of the R&D plan with the plan for the national economy. Because this inspection continued into the second half of 1983 it took account at its conclusion of the objectives of the Eighth CPCZ Central Committee Plenum, which in turn positively influenced the establishment of the state implementation plan for R&D Findings for the current year. It is also serving as the basis for the refinement of plan drafts and is adhered to during final refinements and the implementation stage.

The 1985 plan and guidelines for the 5-year plan include a number of tasks related to the fuel and power issue and increasing the efficiency of fuel and power consumption, the problem of the higher valuation of raw materials and other inputs, the intensification of the agro-food complex, innovations in general engineering products, increasing the value added to chemicals, the development and utilization of industrial robots and manipulators, mechanization and automation, biotechnology, improving the environment and the health care system.

Great emphasis has been placed on the utilization of our natural and raw material wealth, and in particular our forest resources. In this area work is being done on improving cultivating and extraction techniques, the comprehensive utilization of tree-derived materials, water management and the ecological impact on forests of economic intervention, minimizing the problems caused by air pollution and optimizing the breeding of animals in terms of economic and public requirements.

Similarly, in the area of water management research has been focused on the development of the groundwork for a balanced incorporation of water resources into the development of economic sectors without demaging this aspect of the environment, and on new treatment techniques.

One of the key areas of attention has been the enhancement and protection of the environment, where research has focused on questions of air quality, water and forest management, work safety, and the quality of the working and living environment. In this way the 1985 implementation plan for R&D thus reacts to the resolutions of the Eighth CPCZ Central Committee Plenum throughout the entire plan structure.

Great attention throughout the plan is placed on the development and application of socialist economic integration, and primarily R&D cooperation with the countries of the socialist community. The importance is increasing of the assurance of long range target programs for cooperation, the fulfillment of

the plan of multilateral integrational measures, and of bilateral cooperation with the countries of the socialist community and especially the USSR.

Furthermore, the importance has been emphasised of R&D progress which must, in conjunction with results of cooperation on the scientific research base of the socialist states, assure an acceleration of development in critical areas. Task fulfillment in this area is proceeding according to the conclusions of the senior level Economic Conference of the CEMA Member Countries.

The plan for scientific and technical cooperation for this year is based on the foregoing considerations and on agreements for the years 1981-1985, according to which the assurance and fulfillment of particularly important cooperative programs is to be monitored at the level of the central agencies for science and technology of the individual CEMA countries. The plan further demands a more comprehensive evaluation of its influence on a strengthening of the long range strategic character and comprehensiveness of R&D progress and on a reduction in the development time for specific technologies and equipment. In conjunction with this, central agencies are to complete their discussions concerning cooperation with the formulation and the approval of working plans.

The 1985 plan for scientific and technological development also projects a further development of both an active and passive licensing policy.

Along with improving the quality of the plan it is presumed that sectors, VNI, and enterprises will propose additional tasks that will contribute to assuring the objectives of the Eighth Central Committee Plenum, and that priority attention will be devoted to the implementation of R&D progress in social practice, especially by starting production of specific products developed under the R&D plan, the preparation of new tasks for the state R&D plan for the Eighth 5-Year Plan.

#### Improving the Management of R&D Progress

The principles have recently been developed for the planned management of R&D progress in conjunction with work to improve the overall system of planned management of the national economy. Even greater emphasis is at the same time being placed on the long range character and priority program orientation of this approach.

To strengthen the scientific nature, future orientation, and strategic character of national economic management great attention is being devoted to continued work on a long range view of the economic and social development of the CSSR, and especially on an aggregate prognosis for the scientific, R&D, economic and social development of the CSSR for the next 20 years. Existing predictive works are being utilized for this and selected predictions are being formulated in the areas of social, economic, R&D and scientific development, all of which should be abased on the broad utilization of the potential of science and technology.

Basic Trends in the Economic and Social Development of the CSSR to 1995 is another document, the content of which is a long term strategy for the economic and social development of the CSSR for a 10-year period, including a strategy

for the integration of our republic into the international division of labor which was formulated in conjunction with predictive works and uses their current results.

The main trends in R&D work through 1995, as a component of the unified state R&D policy, already contain its basic objectives, i.e. the main strategic objectives including the objectives of basic research (directed by the Czechoslovak Academy of Sciences), applied economic research (directed by REV), research and development, increasing the technico-economic sophistication of production and products, and the introduction of new products and technologies (directed by the State Planning Commission), scientific and technical cooperation, standardization, the development of inventiveness and an eye for improvements, and of the R&D base throughout the entire complex.

Just as the main tasks outlined in the basic guidelines and objectives of state target programs have become a starting point for guidelines for the drafting of the Eighth 5-Year Plan for national economic development, so to the analogous drafting of guidelines for the formulation of the Eighth 5-Year Plan for R&D progress is based on the main trends and proposed objectives of state R&D programs, the state plan for applied economic research, technical development and standardization.

Also worthy of attention is the fact that work on the basic guidelines, and therefore also on the main objectives of R&D progress and on the aggregate prognosis are to be organizationally assured so as to arrange for a cyclical extension of the planning work for an additional 5-year period and so that the necessary documents are always discussed prior to the culminating period of the work on the 5-year plan, i.e. about 2 years before the start of a new 5-year plan.

Among the programs based on a priority program approach, long range comprehensive programs play an indispensable role. They are intended to focus on the resolution of key problems in national economic development, the main trends of structural and qualitative changes, and selected objectives in interdisciplinary and intersectoral relations. Their objectives are constrained by technical and economic parameters.

State priority programs will be tied in to long range comprehensive programs. It is assumed that the former will incorporate to a greater extent than previously a link between research and production, the priority development of selected areas of production, and the implementation of higher level innovations, and thereby also progressive changes in the structure of production. These are programs of a strategic-oriented at the resolution of important intersectoral economic problems implementational character with the emphasis on the application of R&D progress, and require direct management from the center. The implementation of their results is planned as a rule for the upcoming 5-year plan.

For state R&D programs such as priority programs of applied research and development designed to resolve mainly cross-sectoral problems in the main fields of R&D in close conjunction with the economic and social objectives



of society, the results will be implemented mainly over a longer period, often exceeding a single 5-year plan.

The objectives of state priority programs and state R&D programs are set no later than in the guidelines for formulating a draft of a 5-year plan. They therefore express the material interests of the center through the corresponding technico-economic parameters of the priority resolution, along with the established resources designated for the achievement of the above objective. In areas not covered by state target or R&D programs republic R&D programs are already being formed.

State priority programs and R&D programs are meant to be important public priorities. R&D programs that flow from them, to the extent that they are included in the state technical development plan, are binding. Selected independent tasks of the state plan of technical development have the same status because their resolution at the level of the state plan is necessitated by the needs of the national economy.

The state plan for technical development is not merely a plan of R&D work, but includes as well the planning of new production processes and products, and the integration of the results of R&D into the production (output) areas of the national economic plan. The links between these individual parts of the innovation process are provided by a priority program approach, i.e. by a system of coordinating plans. The state technical development plan should be 5 years in duration (just as the state plan for basic research and the state plan for applied economic research) so that it may be refined in the individual years of each 5-year plan, or supplemented as necessary with new programs, on the condition the established technico-economic objectives of the appropriate program will be complied with, or that the amount of resources set aside for a specific program will not be exceeded.

Recently a draft was also formulated of an improved planned management system for the national economy for the period after 1985 which was based on the Set of Measures, the application of which has succeeded in focusing the attention of the economic sphere on the implementing of national economic intensification. It has therefore been deemed essential to derive from the set this work on another improvement in the planned management system.

In conjunction with this work a draft has also been formulated of improved planned management of R&D progress. Also formulated were unified methodological guidelines for the development of a draft of the 5-year plan for 1986-1990. In the area devoted to R&D the principles appear that were adopted at the Eighth CPCZ Central Committee Plenum such as the simplification of the planning process and the phasing out of those indicators the predictive capability of which does not facilitate sufficiently objective decision-making. Also anticipated is a simplification of the structure of the plan for technical development and the incorporation of further measures which will take place in selected VHI during the ongoing experiment to accelerate R&D progress.

Emphasis is being placed on a priority program approach not only for programs as a whole but also for all tasks of the state plan for technical development,

whether they be applied research and development for state priority programs, for state or republic R&D programs, or independent tasks of the state plan of technical development. This is expressed in a system of coordinating plans for each task, a system that has proven itself in planning practice. For the Eighth 5-Year Plan as well it is assumed that in the draft of methodological guidelines for the tasks of the state plan for technical development there will be the possibility of classifying them into smaller tasks and to divide them up both temporally and materially into different stages of resolution.

As a rule the methodological guidelines for tasks focused on R&D for machinery, instruments and equipment recommend the following stages:

- the completion of a new design and the testing of the functioning models of certain key components (laboratory model, functional model);
- research and preparing the groundwork for development (basic data for development, engineering elements, conceptual design);
- developing a design for the basic systems of a prototype;
- developing the engineering and technical groundwork for prototype production;
- prototype production;
- trial (operational) tests of the prototype;
- developing the design documentation for producing a test series or piece work.

Regarding tasks focused on technology-related R&D, the guidelines assume the following stages:

- basic research;
- applied laboratory research;
- testing functional models and developing the groundwork for the assembly of a semi-operational installation;
- building the semi-operational installation;
- testing the semi-operational installation;
- developing the technical documentation and design groundwork for equipment and the design of future production.

Even though the objective of the methodological guidelines for the technical development plan was to reduce the numbers of forms and data and to reduce the administrative difficulty of planning, it has been necessary to do further work on certain aspects of it in order to assure the proper level of

integration with the other parts of the plan. This concerns, for instance, the setting up of semi-operational or test installations, because they are essential as a stage in task resolution, including certain basic information on their design.

In conclusion it must be stated that to assure the resolutions of the Eighth CPCZ Central Committee Plenum a number of measures have been adopted in CSSR, CSR, and SSR Government resolutions to accelerate the practical implementation of R&D results. In conjunction with this further activities will take place in the area of research and development.

9276

CSO: 2400/372

CZECHOSLOVAKIA

CENTRAL BOHEMIA'S ECONOMY REVIEWED BY SECTOR

Prague RUDE PRAVO in Czech 23 Apr 85 p 3

[Text] During the past 40 years, more than Kcs 340 billion were invested in the economy of the region. In comparison with 1948, investment work and supplies rose last year eightfold. Industrial production increased by a factor of 10.5 during the same period.

The most important sector is the machine tool industry, including electro-technical and metalworking industries, which contribute more than one-third of the total output. Production in the machine tool enterprises, for example, rose by 261 percent in comparison to 1960.

The chemical industry occupies first place in the CSSR with regard to production volume, which expanded by almost 695 percent over the past 25 years. Its base was strengthened significantly by the opening of Kaucuk in Kralupy nad Vltavou in 1964 and further in the sixties by the reconstruction of Spolany Neratovice.

The region is one of the best agricultural regions in the CSSR. Central Bohemian farm workers ensure the availability of produce for the manufacture of foodstuffs not only for the population of the region but for Prague as well. They are outstanding producers of grains (last year they achieved an average yield of 5.04 tons per hectare), sugar beets, vegetables and fruit. Beside cooperatives and state farms, specialized enterprises such as Agropodnik Kutna Hora, Joint Agricultural Enterprises in Semice, Tisice and elsewhere also contribute their share. A hectare of agricultural land in the region yields, for example, 280 kilograms of meat, which puts it in third place in the Republic.

In the period of post-war construction more than 220,000 apartments were finished. The citizens of Pribram, Horovice, Ricany and Brandys nad Labem were given new hospitals. At the same time, the departments of many other health facilities were expanded. Whether through a contractor or by cooperative building through action Z, roughly 100 new elementary schools were established. In the Fifth 5-Year Plan, the working people of Kladno and Mlada Boleslav took over the two largest cultural centers in the region.



Drivers from the year 1945 would not recognize today's network of roads. In those days only Class I roads had a paved surface, an exception in case of Class II roads. Today Class III roads also have a hard surface and are usually asphalted. Main transportation arteries are undergoing unprecedented modernization.

Important construction of transportation facilities, ensuring above all connections with the capital of Prague, include, among others, the following: modernization of the Prague-Kolin-Pardubice railway line, reconstruction of the railway junction in Kralupy nad Vltavou, the Prague-Brno-Bratislava expressway and a portion to Plzen and Hradec Kralove, and making the Elbe navigable from Kolbin to Chvaletice.

The increase in the material standard of living of the population is reflected in the way households are equipped with durable appliances. In 1980, for example, 88.9 households had a refrigerator and 90 percent had television sets. With the increase in wages of the population and increased savings, deposits have been growing rapidly. An average deposit per person in the region amounted to only Kcs 2,027 in 1961, but in 1984 it was already Kcs 13,990.

Central Bohemia is a sought-after place for recreational purposes. Recreational attractions are the river basins of Vltava, Sazava, Berounka, or the Slapy and Orlice dams, where the citizens of Prague spend most of their leisure hours. The region also has four protected scenic areas, the largest is which is Krivoklatsko.

12605

CSO: 2400/382

CZECHOSLOVAKIA

ABSENTEEISM IN LIGHT OF STATISTICS

Prague SVET PRACE in Czech No 5, 1985 p 20

[Excerpts] "The discussion of 6-month and annual analyses of job absenteeism in the Factory Commissions of the Revolutionary Union Movement is attended by a) the head of the factory (manager) or his deputy, who is empowered to represent the factory and make commitments in its name, and b) the factory physician (the head of the factory's health administration), or a physician entrusted with the care of the factory's workers. . . ." (Quoted from the "Provisions of the CSSR Government and the Central Council of Unions [URO] for implementation of the analyses of job absenteeism," approved by the URO Presidium on 8 September 1982, and by the CSSR Government on 16 December 1982, as an addendum to Government Resolution No 358/1982.)

These provision introduced essential change to counter the existing situation, in which factory union organizations were often not successful in convincing the economic leadership of the necessity of close cooperation in dealing with the analyses of job absenteeism. In order to plan action in the union organization, the provisions imposed the analyses of job absenteeism on state and economic organizations.

Factory commissions of the Revolutionary Union Movement discuss the 6-month analysis of job absenteeism no later than 15 August and the annual analysis no later than 15 February of the following year.

Last August the URO Presidium discussed the first summary report compiled by the Central Administration of Health Insurance (USNP) from data obtained by this method on trends in job absenteeism in the CSSR in 1983; the presidium also discussed information on trends in job absenteeism in the first half of 1984.

What did it show?

Job absenteeism due to illness and injury reached 4.3 percent among employed workers, which was a .12 percent increase over 1982. Among cooperative farmers it reached 4.11 percent (a rise of .13 percent), among members of manufacturing cooperatives in the CSR 5.14 percent (a rise of .16 percent), and in the SSR 4.84 percent (rise of .13 percent). In the entire CSSR in 1983 there were 305,539 daily occurrences of absenteeism, which was 12,234 more than in 1982, and 16,193 more than in 1981.

The major portion of illnesses were disorders in the upper respiratory tract, including influenza. In 1983 the amount of job absenteeism because of work-related and non-work-related injuries was the same as in the previous year. Non-work-related injuries are, however, more than twice as frequent as work-related injuries. An average of 8.18 non-work-related injuries occur for every one hundred workers. An average period of 22.09 days missed applies for each non-work-related injury.

In third place among causes of job absenteeism are complaints associated with motor organs; in fourth, illnesses of the digestive system; illnesses of the circulatory system have long been in fifth place. Last year there were 4,138 newly reported disorders which were caused by work-related illnesses: 363 more than in 1982.

In its report the USNP stated that it is possible to a certain degree to evaluate trends in job absenteeism as a reflection of living and working conditions. These trends are reason for focussing general societal attention on improving care for working women, whose overall work load is growing unfavorably.

The relative order of the three departments with the highest incidence of illness did not change. In 1983 the highest incidence was again in mining and energy: 5.376 percent. The USNP, by agreement with the office of the CSSR Government Presidium, and with representatives from the united union organization participating, performed an inspection--in the major mining districts--of the fulfillment of the targets which came out of CSSR Government Resolution No 129/1982 on the intensification of health care for mine workers. The amount of overtime in hazardous underground work areas rose in places, and there have been programs devised to gradually reduce it. Additional leave with a rehabilitation program is granted for planned mandatorily worked Saturdays. This affects 7,700 workers annually in the OKR [Ostrava-Karvina Coal Basin]. In some districts the establishment of a critical limit for particulate matter and a maximum time for performing work underground before retirement is lagging. Stipulations for measuring noise are improving though. However, the delivery of measuring devices is proceeding slowly. New mining equipment and tools completely lack certification of state testing in accordance with biotechnical requirements. With the addition of modern technology, particulate matter increases; and anti-noise measures are likewise insufficient. Proposals for introducing mining equipment should not be made in advance of discussions with qualified hygiene service personnel.

The second highest percentage of job absenteeism is in the food industry: 4,782. A great number of these workers are women. They are exposed to the burdensome conditions of this working environment and exhausting labor, which, despite all of the mechanization introduced, it is impossible to eliminate from the food industry. Furthermore, equipment is outdated and modernized very slowly. In 1983 the highest count of work-related injuries was in the food industry: 4.54 yearly per 100 workers.

In third place was the textile, clothing, and leather industry: 388,255 illnesses. This branch has long occupied third place. It is typified by

female employment, streamlined conveyer production with very intense work at a forced rhythm, fixed efficiency norms, frequently monotonous actions, and an incumbent position in which to perform the work. In addition, in the CSR, in contrast to the SSR, the age of the factories, in particular textile factories, enters into consideration. Higher absence rates and fluctuations in the availability of childcare result in more overtime and Saturday work.

The reversal being brought about by the initiatives of union organizations and the CSSR Government results from the new method of preparation and discussion of analyses of job absenteeism. Currently it is no longer a matter of commenting on statistics, but one of analyzing their causes--analyzing health care that it might determine objective measures for improving working conditions and the working and living environments. These are the things which most influence health conditions by their longterm effects.

12290

CSO: 2400/378

CZECHOSLOVAKIA

GEOTHERMAL RESOURCES IN SLOVAKIA NEED DEVELOPING

Prague RUDE PRAVO in Czech 16 Apr 85 p 2

[Text] Geothermal waters lie beneath the surface of almost one-third of the Slovak Socialist Republic territory. According to the estimates of experts, it should be possible to obtain 3,500 liters of about 65 degree water per second, which represents the output of approximately 500 megawatts. In reality, the present use of it represents only 20 megawatts.

Geothermal water is being used in agriculture and for recreational purposes. On the technical side, the simplest form of heat delivery is prevalent-directly injecting water into central heating systems or possibly swimming pools. Usage in several steps, where heat is taken out of the water progressively, is practiced only in isolated instances. An example of that is Topolniky, where 74 degree water is being used to heat greenhouses and sports facilities.

Based on the use of geothermal water, Slovakia has in operation 4.5 hectares of greenhouses, 8.2 hectares of hothouses, 22 swimming pools, a sports hall, and a fish hatchery. By solving certain technical problems, it will be possible to intensify the use of this geothermal energy in the future.

12605

CSO: 2400/382

CZECHOSLOVAKIA

SOFT DRINK CONSUMPTION HAS 'ADVERSE' EFFECT

Prague RUDE PRAVO in Czech 16 Apr 85 p 2

[Text] The consumption of brand non-alcoholic beverages in Czechoslovakia has been increasing annually by 30 to 50 percent during the last several years.

The growing consumption of soft drinks, however, has an adverse effect on indirect consumption of sugar. Just one-fourth liter of a beverage contains roughly 25 grams of sugar. Our organism receives more than 7 kilograms of sugar each year from soft drinks, or almost one-fifth of the total intake.

The solution, therefore, is to increase the production of low-calorie beverages; that is, beverages having the caloric value half that of comparable products.

12605

CSO: 2400/382

GERMAN DEMOCRATIC REPUBLIC

ECONOMIC GROWTH STATISTICS QUESTIONED

Bonn DEUTSCHLAND ARCHIV in German Vol 18 No 4, Apr 85 (signed to press 25 Mar 85) pp 376-385

[Article by Dr Gernot Schneider, formerly on the faculty of the East Berlin Economics College, now on the academic staff of the East Europe Institute at the Free University of Berlin: "Qualitative Growth of the GDR National Economy?"]

[Text] The SED leadership and those whose profession it is to interpret what course of economic policy they follow some time ago decided the question of economic growth: They advocate continuing economic growth with the aid of qualitative growth factors--the transition to "intensification," as they call it--because otherwise there could be no social progress. And in fact there is no lack of effort to convince people via all channels of communication in the GDR that the path toward qualitative new economic growth has already been followed with success. At no other time prior to this 35th anniversary year of the founding of the GDR has so much official and semi-official statistical data been made public; and never has such a great propaganda effort been made to show a direct relationship between the increased standard of living and growth in terms of important national economic figures. This kind of undifferentiated self-exposure has not failed to have an effect on external observers. Even the German Institute for Economic Research in West Berlin accorded the GDR leadership "successful production efforts" in mid-1984 and evaluated the results of the first half of 1984 as "substantial progress in terms of growth."<sup>1</sup>

Can such "progress in terms of growth" really be proved beyond a shadow of a doubt? Is it justified or correct to base such conclusions on the "indicators for economic development in the GDR"?<sup>2</sup>

Economic growth in and of itself--continuing increases in the most significant material production figures in and of themselves--are no clear indicator of economic progress in a socialist-led national economy in which the party/state apparatus functions as the "absolute entrepreneur." On the contrary, experience has taught us that high growth rates can even be the result of ineffective economic activities or even technical or technological backwardness, an example of which is the decades-old practice of ensuring growth in terms of



the economic indicators "industrial production of goods" and "gross production" by means of inflated cooperative relationships (purchased parts), material-intensive production methods and excessive energy use. Surely these contradictions were known well enough in the socialist countries, but no serious steps were taken to correct them.

Some time ago the Soviet economics expert Antschischkin attempted to make a breakthrough in this regard by pointing out the possible opposing forces involved in economic growth and social progress. At that time the GDR leadership, for example, was not yet prepared to engage in serious consideration, not to mention public discussion, of whether this growth fetish which they had already survived in the past was to be overcome and how this might happen. Antschischkin's call for a new type of economic growth--qualitative growth--coupled with slowed growth rates in production fell on deaf ears. Today, given the conditions created and the solutions offered--one is tempted to say thankfully--by the non-socialist side for more efficient and environmentally sound handling of raw materials, other materials and energy sources, the top people in the SED are now seeing the necessity of concurring with Antschischkin's suggested changeover from a capital-intensive to a capital-conserving kind of economic growth. However, they are not doing it without reservations; as already mentioned above, they continue as before to present economic propaganda regarding an *"uninterrupted relationship to growth"*<sup>4</sup> [in italics], calculating unusually high growth rates without ever justifying why such grandiose growth figures in the final analysis are only able to *"maintain the standard of living achieved and improve it step by step."*<sup>5</sup> [in italics]

Although employment in industry has increased annually by 20,000 since 1980, investments in industry increased from about 29.3 billion marks in 1980 to somewhat over 31 billion marks in 1983. First of all, however, these growth rates are substantially lower than the increases in such national economic indicators as "national income" (gross national product), "net industrial production," "labor productivity," "production of industrial goods" and "foreign trade." And secondly, public propaganda indicates that this significant growth came about even though the specific consumption of energy sources, raw materials and other materials important to the national economy was reduced by an average of 6 percent every year since 1981. Moreover, the volume of goods transported decreased by 135.5 million metric tons from 1981 to 1983, a figure which corresponds to just under 14 percent of the total of all goods in 1983. In crass contrast to these publicly stated achievements in growth are the foreign debt of the GDR and the increasingly poor assortment of consumer goods for private consumption.

The question then is what sources provide for growth in the GDR national economy and who utilizes them.

#### Price Increases for Industrial Goods

One of first real sources of growth proved to be the price increases for industrial goods introduced in 1976 and continued ever since. With this new pricing policy the basic principle of price stability within a five-year



planning period was finally given up. According to its basic intention--to implement cost-covering prices in line with international pricing and to reward new or additional developments with profit surcharges (in other words using a constantly changing assortment of goods as an alibi for constant price increases, particularly for consumer goods)--the pricing policy currently in effect facilitates permanent growth in the value figures for "production of industrial goods" and "net product" or "national income produced." At the same time these growth figures also do not guarantee that production reflects local or international market demands or that there are customers for the products, just as they do not on the other hand permit clearcut conclusions about quantitative growth. Nevertheless, under the conditions created by the new pricing policy the value figures can rise, while, with product quality remaining constant, production quantity levels stagnate or even decline. Such developments are in fact taking place as can be seen from a compilation of the important production figures for GDR industry taken from the GDR Statistical Abstracts (see Table 1). Among the items selected are many products whose maximum values did not decrease in 1983 or whose growth trend was not nearly so striking as an official reading based primarily on financial figures would have us believe.

Do not misunderstand; this is not a plea for quantitative growth at any cost. But those who know the facts behind the GDR statistics given under "Modernization and Expansion" for available housing materials, to give a concrete example, cannot, despite the best of intentions, show growth from the quantitative decline in construction material production and the decline in quality in the already greatly scaled-down "new housing construction" sector.

By comparing the same economic elements based on different base prices in each case (see Table 2) the extent to which such price manipulations are carried out within the overall national economy becomes clear. It can be seen that the productive consumption share of the "overall social product" (gross product) in 1950, based on 1967 pricing, was about 46 percent or 24.8 billion marks, and it increased by 1965 to a share of 58 percent or 115.8 billion marks. On the other hand, comparing the figures based on 1980 pricing, the 1950 share is 62 percent or 48.4 billion marks and the 1965 share is a good 63 percent or 158.5 billion marks. While in the first example productive consumption increased by 12 percentage points, it remained nearly constant in the second example, for which entirely different conclusions for the national economy could be drawn.

Therefore, given the circumstances of a consistent lack of a firm pricing system for raw materials, capital goods and consumer goods, statements concerning "successful growth" are only valid within the context of the overall quantitative and qualitative figures.

Table 1. Industrial Production of Selected Products By Quantity

(1) Erzeugnisse	(2) Mengeneinheit	1955	1960	1965	1970	1979	1980	1981	1982	1983	absoluter Maximalwert (3)
(11) Rohstahl einschließlich Flussigstahl für Formguß	Mio. t (4)	2.82	3.75	4.31	5.05	7.02	7.31	<b>7.47</b>	7.17	7.22	-
(12) Walzstahl, warmgewalzt	Mio. t	1.88	2.81	2.99	3.41	5.06	<b>5.13</b>	5.06	4.96	5.08	-
(13) Erzeugnisse der II. metallurg. Verarb.-Stufe	Mio. t	0.31	0.50	0.73	1.69	3.36	3.53	3.64	<b>3.65</b>	3.61	-
(14) Mauerziegel und Klinker, Normalformat	Mio. Stück (5)	1963	<b>2272</b>	1410	1280	1229	1230	1242	1104	1118	-
(15) Betonerzeugnisse	Mio. t	1.66	6.97	10.68	16.55	26.51	<b>27.72</b>	25.17	21.68	21.70	-
(16) Zement	Mio. t (6)	2.97	5.03	6.09	7.98	12.27	12.44	12.20	11.72	11.78	12.52 (1978)
(17) Neubauwohnungen	1000 Stück	32.8	71.9	65.8	96.0	117.4	120.2	<b>125.2</b>	122.4	122.6	-
(18) Baumwollgewebe	Mio. m <sup>2</sup> (7)	201	254	244	248	262	277	286	288	<b>298</b>	-
(19) Kammgarn- und Halbkammgarngewebe	Mio. m <sup>2</sup>	13	24	21	22	27	27	27	<b>28</b>	27	-
(20) Streichgarngewebe	Mio. m <sup>2</sup>	19	<b>25</b>	18	15	11	12	12	12	12	-
(21) Tülie und Gardinen	Mio. m <sup>2</sup>	44	61	69	84	138	137	138	134	136	139 (1978)
(22) Untertrikotagen	Mio. Stück	104	137	149	145	175	177	<b>182</b>	<b>186</b>	181	-
(23) Obertrikotagen, Bade- und Trainingsbekleidung	Mio. Stück	16	25	27	41	58	59	<b>60</b>	58	58	-
(24) Leistungstransformatoren	1000 Stück	6	13	11	9	12	13	<b>16</b>	12	12	-
(25) Großschreibmaschinen	1000 Stück	-	-	126	170	224	227	235	<b>245</b>	231	-
(26) Wechselstrommotoren	MW (8)	-	-	3275	4343	7185	7594	<b>8111</b>	7496	7180	-
(27) Color TV	1000 Stück	-	-	-	9	181	264	310	<b>325</b>	321	-
(28) Rundfunkgeräte	1000 Stück	725	810	808	807	964	915	965	900	975	1075 (1962)
(29) Ferngläser	1000 Stück	119	113	82	136	<b>253</b>	248	248	248	239	-
(30) Armbanduhr	Mio. Stück	1.83	2.75	2.22	3.31	-	3.70	4.12	<b>4.44</b>	3.27	-
(31) Papier	1000 t (9)	422	542	644	720	827	842	<b>860</b>	857	860	-
(32) Verpackungskarton und Pappe	1000 t	229	268	290	343	394	400	398	404	384	409 (1975)
(33) Planos/Flügel	1000 Stück	8	10	17	21	28	<b>29</b>	29	29	29	-
(34) Schuhe, gesamt	Mio. Paar (10)	41	54	61	78	78	79	80	82	82	85 (1974)
(35) Fensterglas	Mio. m <sup>2</sup>	14	16	21	21	24	23	<b>25</b>	24	24	-
(36) Eisenbahn- personenwagen	Stück	697	<b>1705</b>	1088	1519	1547	1479	1612	1649	1452	-
(37) Pkw	1000 Stück	22	64	103	127	171	177	180	183	<b>188</b>	-
(38) Fahrräder	1000 Stück	<b>724</b>	818	445	417	614	614	628	631	651	-
(39) Mähmäcker	Stück	-	1569	2743	4645	-	4810	5460	5100	6055	8172 (1973)
(40) Gußeisen, Temper- und Stahlguß	Mio. t	0.85	1.14	1.15	1.07	<b>1.33</b>	1.33	1.32	1.30	1.29	-
(41) Eisenbahngüterwagen	Stück	4002	2380	2172	<b>5709</b>	5274	4455	4808	3811	3145	-
(42) Omnibusse	Stück	708	415	542	3032	2919	2870	<b>3041</b>	2469	1688	-
(43) Rohbraunkohle	Mio. t	201	225	251	261	256	258	267	276	<b>278</b>	-
(44) Braunkohlenbrikett	Mio. t	51	56	60	57	49	50	50	50	50	62 (1964)
(45) Braunkohlen- tieftemperaturkoks	Mio. t	6.4	<b>6.7</b>	6.3	5.0	2.8	2.7	2.7	2.9	3.2	-
(46) Braunkohlen- hochtemperaturkoks	Mio. t	0.5	1.0	1.1	1.3	2.4	<b>2.6</b>	2.6	2.6	2.5	-
(47) Dieselmotoren, einschließlich Petroleum	Mio. t	0.7	1.3	2.3	3.6	6.0	<b>6.1</b>	5.6	6.1	6.1	-
(48) Schwefelsäure	1000 t	592	730	985	1099	952	958	<b>948</b>	920	926	1104 (1969)
(49) Kalzium Soda	1000 t	458	594	682	676	860	868	<b>878</b>	882	<b>887</b>	-
(50) Kalziumhydroxid	1000 t	30.3	35.1	37.5	45.0	48.8	48.4	47.6	<b>50.5</b>	49.4	-
(51) Kalziumkarbid	Mio. t	0.79	0.92	1.19	1.25	1.20	1.20	1.19	1.18	1.18	1.35 (1973)
(52) Phosphatdünger	1000 t	85	116	232	<b>430</b>	411	370	360	286	315	-
(53) Quelle: Zusammenge stellt aus Statistisches Jahrbuch bzw. Taschenbuch der DDR, entsprechende Jahrgänge											

[Key on next page]

Key:

- |  |   |
|--|---|
| 1. Product   | 26. AC motors   |
| 2. Unit of Quantity                                | 27. Color TVs   |
| 3. Absolute Maximum Value                          | 28. Radios  |
| 4. Million Metric Tons                             | 29. Binoculars  |
| 5. Million Pieces                                  | 30. Wristwatches  |
| 6. 1000 Pieces                                     | 31. Paper   |
| 7. Million m <sup>2</sup>                          | 32. Packing cartons and cardboard   |
| 8. Megawatts                                       | 33. Upright and grand pianos  |
| 9. 1000 Metric Tons                                | 34. Shoes, total  |
| 10. Million Pairs                                  | 35. Window glass  |
| 11. Raw steel, including liquid steel for casting  | 36. Railroad passenger cars   |
| 12. Rolled steel, warm rolled                      | 37. Automobiles   |
| 13. Products of 2nd metallurgical processing stage | 38. Bicycles  |
| 14. Clay and clinker brick, standard format        | 39. Field choppers  |
| 15. Concrete products                              | 40. Cast iron, annealed cast iron or cast steel                           |
| 16. Cement   | 41. Railroad freight cars   |
| 17. New housing                                    | 42. Buses   |
| 18. Cotton fabric                                  | 43. Raw brown coal  |
| 19. Worsted and mock-worsted fabric                | 44. Brown coal briquettes   |
| 20. Carded wool yarn fabric                        | 45. Brown coal low-temperature coke                                       |
| 21. Tulle and curtain net                          | 46. Brown coal high-temperature coke                                      |
| 22. Knit undergarments                             | 47. Diesel fuels, including crude petroleum                               |
| 23. Knit outerwear, swimwear and sports clothing   | 48. Sulfuric acid   |
| 24. Power transformers                             | 49. Calcinated soda   |
| 25. Large typewriters                              | 50. Calcium hydroxide   |
|  | 51. Calcium carbide   |
|  | 52. Phosphate fertilizers   |
|  | 53. Source: Compiled from GDR Statistical Abstracts, corresponding years. |

### Military and National Security Policy Decisions

A second important source of growth involves structural policy decisions by the party and national leadership in the area of armaments, national security or other complex areas of strategic significance.<sup>6</sup> What weight such decisions can have and how difficult it is for those not well versed in such matters to determine the actual scope of these "growth factors" can be clearly seen from the data given in Table 3. While the official figure reported and determined for propaganda purposes for "defense in the broadest sense" is an approximately constant figure of 8 percent of all national expenditures, and while the rendering of accounts publicized once each year in the press shows items under expenditures which are currently far below 0.1 percent, the purposes for which about 25 percent of all national expenditures are made (in 1983 that amounted to 48.3 billion marks) remain shrouded in darkness. There is thus no evidence of where this money amounting to three times the annual

internal and external expenditures for defense goes, however general numerical growth (both quantitative and qualitative) is not difficult to trace to such "government contracts" even when they use up rather than add to the "natural resources of the people."

Conclusion: Under conditions of state controlled and directed production, it is not accurate to base general successful economic development on production and economic growth figures. The reasons for economic growth must be looked into in greater depth.

#### Expenses Involved in Lowering Crude Oil Demand

The third source of current economic growth is represented by the large-scale energy-source refurbishing activities in which the substitution of crude oil for brown coal initiated twenty years ago is again being reversed in some cases. This involves a number of economic measures, the overall significance of which cannot yet be fully evaluated, because they affect many areas of the national economy. Inordinately large expenditures of money and materials will continue to be necessary to enable the return to these outdated energy sources and to substitute raw brown coal for crude oil. There is no question even now, however, that growth connected to the increased use of raw brown coal bears no relationship to "social progress." Due to the importance of this "growth sector" in the GDR's statistics, somewhat more detailed information is needed here: The original considerations for preparing the draft five-year plan at the GDR's central planning office aimed at procuring up to 24 million metric tons of crude oil from the Soviet Union annually from 1981 to 1985 (1980 level was 19 million metric tons). Under the pressure of international market prices and as a result of the already greatly increased ties to their Soviet partners by 1980 (12 billion valuta marks), the decision was made to import 19 million metric tons of crude oil annually until 1985. In the meantime, even these planned objectives have proved no longer feasible. Crude oil imports were reduced to 17.1 million metric tons (after 1983). In a parallel development, despite strict regimentation and contingency planning for crude oil consumption, there were unofficial calculations as early as 1981 which called for increases in brown coal use at an annual consumption of 300 million metric tons by 1985, e.g. an increase of about 40 million metric tons over 1980. At the moment there is no reason to think that this objective cannot be achieved.

There is certainly agreement that the acute foreign trade deficit of the GDR will place limitations on their crude oil consumption. But there is still some doubt as to whether this return to the old structures, this harking back to an increasingly less economical domestic source of raw materials, really offers tenable solutions. And finally, not only has the coal-to-waste-material ratio worsened (from 1.8 to 1 in around 1930 to 15 to 1 in 1984), but the quality of the raw brown coal mined is also decreasing (reduced heating capacity, increased salt content).

Table 2. Productive Consumption (Total Social Product Minus National Income Produced) Based on Variable Base Pricing

(1) Anteil des Produktionsverbrauchs am Gesellschaftl. Gesamtprodukt in Prozent					
(2)	zu laufenden Preisen <sup>a</sup> des jeweiligen Jahres	(3)	zu vergleichbaren Preisen <sup>b</sup> (Basis 1975)	(4)	zu vergleichbaren Preisen <sup>c</sup> (Basis 1980)
1949	-	56,7	(5) (6)	62,9	
1950	46,0 (bzw. 24,8 Mrd.)	56,7 (bzw. 35,8 Mrd.)		62,3 (bzw. 48,5 Mrd.)	
1955	48,1	53,6		59,8	
1960	50,8 (bzw. 72,4 Mrd.)	55,6 (bzw. 89,7 Mrd.)		60,7 (bzw. 118,5 Mrd.)	
1965	58,3 (bzw. 115,8 Mrd.)	58,9 (bzw. 121,2 Mrd.)		63,5 (bzw. 158,5 Mrd.)	
1966	58,6	59,2		-	
1967	-	59,5		-	
1968	-	60,0		-	
1969	-	60,5		-	
1970	-	60,6		64,8	
1971	-	60,8		65,0	
1972	-	60,9		65,0	
1973	-	61,2		65,0	
1974	-	61,3		65,0	
1975	-	61,6		65,2	
1976	-	62,1		65,6	
1977	-	61,9		65,5	
1978	-	62,1		65,7	
1979	-	62,1		65,6	
1980	-	62,1		65,5	
1981	-	-		65,1	
1982	-	-		64,3	
1983	-	-		63,7	

- a. Statistisches Jahrbuch der DDR 1967. Staatsverlag Berlin (Ost) 1967 (7)  
b. Statistisches Jahrbuch der DDR 1981. Staatsverlag Berlin (Ost) 1981 (8)  
c. Statistisches Jahrbuch der DDR 1984. Staatsverlag Berlin (Ost) 1984 (9)

Key:

1. Productive Consumption Share of Total Social Product in Percent
2. At current prices<sup>a</sup> for the given year
3. At comparable prices<sup>b</sup> (based on 1975)
4. At comparable prices<sup>c</sup> (based on 1980)
5. or
6. billion
7. a: 1967 GDR Statistical Abstract, Staatsverlag (Government Printing Office), East Berlin, 1967
8. b: 1981 GDR Statistical Abstract, Staatsverlag, East Berlin, 1981
9. c: 1984 GDR Statistical Abstract, Staatsverlag, East Berlin, 1984

Table 3. National GDR Budget in Billions of Marks

(1) Jahr	(2) Einnahmen gesamt	(3) nicht näher nachgewiesene Einnahmen gesamt		(6) Ausgaben gesamt	(7) Ausgaben für Verteidigung im weiteren Sinn		(8) nicht näher nachgewiesene Ausgaben gesamt	
		(4) absolut	(5) v. H.		absolut	v. H.	absolut	v. H.
1979	140,6	11,7	8,3	140,3	12,3	8,7	25,1	17,9
1980	160,6	16,0	10,0	160,3	13,2	8,2	38,2	23,8
1981	167,5	19,0	11,3	167,2	14,2	8,5	36,0	21,5
1982	182,8	17,4	9,5	182,1	15,1	8,3	43,0	23,6
1983	192,4	20,4	10,6	191,7	16,0	8,3	48,3	25,2

Quelle: Zusammengestellt und errechnet aus entsprechenden Veröffentlichungen in "Neues Deutschland" (9)

[Key on next page]



Key:

- |  |  |
|--|--|
| 1. Year                                | 6. Total expenditures  |
| 2. Total income                        | 7. Expenditures for defense in the broadest sense                                  |
| 3. Total income, not specified further | 8. Total expenditures, not further specified                                       |
| 4. Absolute                            | 9. Source: Compiled and calculated from information published in NEUES DEUTSCHLAND |
| 5. Percent                             |  |

In the process of opening new mines and complete exploitation of existing ones 70 towns must be moved and 150 km of highways, 130 km of railroad tracks and 65 km of waterways must be diverted.

Increased mining of brown coal has far-reaching consequences. In the first place it places a greater burden on the national transportation system, because the low heat-producing capacity of brown coal and its low density makes moving it from place to place uneconomical compared to crude oil. In order to produce 10<sup>9</sup> kcal of energy from brown coal, for example, about 500 metric tons filling 10 railroad cars is required. An equivalent amount of energy produced from crude oil requires 100 metric tons or just under two railroad cars worth.

In the second place, the accelerated pace at which brown coal can be mined is disproportionate to the available capacity for producing brown coal briquettes or high-temperature coke. The pace at which numerous briquette factories were taken out of service or shut down during the 1970's in order to stimulate the much more productive consumption of fuel oil and natural gas can be seen in Table 1. Based on the complete turnaround in the circumstances regarding current and future energy policy, extensive investments will be necessary in order to properly exploit increased raw brown coal production. At the moment it is sometimes necessary, as was the case at the end of the 1950's, to burn unprocessed raw brown coal. Moreover, the shortfall in industry of available coke produced from hard coal is being made up by the increased use of brown coal high-temperature coke, thus leaving scarcely any coke available for central heating in private households.

In the third place, the planned mining of raw brown coal will destroy valuable top soil for decades despite all serious efforts to recultivate the excavation pits. At the same time this mining will place additional stress on the already thinly stretched water supply of the GDR because strip mining lowers the groundwater table, changing valuable groundwater into surface water of lesser quality. For each metric ton of raw brown coal mined about six metric tons of water must be removed, twice as much as in 1957.

In addition, the substitution of brown coal for crude oil requires that money be spent to convert to brown coal processes in the energy producing and chemical industries which have up to now been based on crude oil. The combustion chambers in many heating and power plants, as well as in industrial furnaces, have had to undergo refurbishing within the past few months so that they could burn briquettes or even raw brown coal rather than fuel oil or gas. The current state of this refurbishing process can be seen in Table 4 below.



Table 4. Energy Production in the GDR Listed By Energy Sources (in percent)

Energieträger (1)	1955	1960	1970	1975	1979	1980	1981	1982	1983
Rohbraunkohle (2)	63,2	72,7	83,2	82,8	79,5	78,1	79,3	81,5	80,8
Braunkohlenbriketts (3)	9,0	6,8	1,8	0,9	0,7	0,6	0,5	0,5	0,5
Steinkohle (4)	6,1	4,4	1,4	0,6	0,7	0,5	0,3	0,3	0,2
Kernbrennstoff (5)	-	-	0,7	3,2	10,1	12,0	11,8	10,5	11,7
Wasserkraft (6)	1,7	1,5	1,8	1,5	1,4	1,7	1,7	1,7	1,6
Mineralöl (7)	0,1	0,1	2,6	3,6 <sup>a</sup>	2,4	1,2	0,9	0,7	0,5
sonstige Brennstoffe (8)	19,9	14,5	8,4	7,5	5,2	5,9	5,4	4,8	4,6
gesamt (9)	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
a = 1973									
Quelle: Zusammenge stellt aus Statistisches Jahrbuch der DDR, verschiedene Jahrgänge. (10)									

Key:

- |                          |                                      |
|--------------------------|--------------------------------------|
| 1. Energy source         | 7. Mineral oil                       |
| 2. Raw brown coal        | 8. Other fuels                       |
| 3. Brown coal briquettes | 9. Total                             |
| 4. Hard coal             | 10. Source: Compiled from the GDR    |
| 5. Nuclear fuel          | Statistical Abstracts, various years |
| 6. Hydroelectric power   |                                      |

Refurbishing processes of a similar nature are required in agriculture because a significant number of the drying facilities required in the production of industrially prepared feed mixtures must be converted from fuel oil to brown coal.

Moreover, about 30 million metric tons of raw brown coal is used today as the raw material for producing high-quality chemical products. By 1990, processes for brown coal gasification and liquefaction are expected to be developed which will significantly increase the economic uses of raw brown coal.

And last but not least, the substitution processes mentioned here also have additional consequences which result without exception in lowering the utility value of brown coal as compared to crude oil. These consequences include:

- impact on the environment in terms of increased odors and contaminants (clean-air measures)
- construction of suitable storage facilities for solid fuels (to protect against quality losses due to weathering or to prevent spontaneous combustion due to solar radiation)
- reorganization of in-plant transportation systems (systems for transporting bulk goods, hoists, etc.)
- clean up (collection and removal of ash and other by-products)

Only for the purpose of rounding out our picture of the overall problem do we also mention the increased labor costs due to the need for additional workers and as compensation in the form of wage increases or bonuses for the less favorable working conditions of the labor force (noise, dirt, physically difficult and unhealthy work).

Similar, from an economic point of view, to the substitution of raw brown coal for crude oil, but not really comparable, is the decision of the GDR leadership as of the spring of 1980 to halt domestic air travel and to transfer

freight shipments from the highways to the rails and waterways for the purpose of conserving fuel. This too is a complete reversal of prior policy concerning the infrastructure of the GDR.

Railroad traffic which for decades has been based on diesel locomotives--even extending to the required clearance on bridges which the railroad lines cross --is now being converted to electric operation at breakneck speed. Between 1950 and 1980 only 987 km of railroad lines were electrically powered; between 1981 and 1985 that number was to double. There is no doubt that at this pace there will be no time for a thorough, measured renewal of track ballast. The electric trains are also not permitted to go faster than 120 km/h. The still completely functional diesel locomotives are being replaced by newly developed Model 212/243 electric locomotives from the main plant of the "Hans Beimler" LEW (Locomotive Construction and Electrotechnical Plant) Combine in Henningsdorf.

Transport, loading/unloading and storage processes are also undergoing substantial changes. The minister of transportation in the GDR, Otto Arndt, in a discussion at the 9th Plenary Congress of the central committee of the SED in November 1984 provided some insight in this regard. He mentioned, for example:

- the reopening of about 40 access stations (freight forwarding stations) within the railroad system and the expansion of the capacity of existing access stations
- the commissioning or reopening of 280 feeder lines to enterprises (this is particularly urgent for those enterprises which were originally located in the countryside and generously provided with their own fleet of trucks)
- the creation of a domestic forwarding system and collective shipments for express freight
- the creation of 16 additional access stations (with appropriate loading and unloading facilities) to the inland waterways in order to take some of the load off the railroad (particularly in terms of construction materials, coal and sugar beets).

Demand for transportation and packaging facilities in the enterprises is increasing, compared to long-distance trucking, as are shipping damage and shipping times.

Without a doubt the conversion of the railroad to electric operation benefits the environment and is therefore laudable. But this aspect of the situation was not the basis for the decision, as evidenced by the recent replacement of some diesel locomotives by even less environmentally sound steam locomotives. The decision favoring diesel locomotives, made in the 1960's, was also to avoid the extremely high cost of electrifying the railroad lines. Now electrification must be pursued at substantially increased costs, sacrificing what has been accomplished up to now.

In this discussion of growth we must remember that the conversion from one energy source to another, as well as the reorganization of the transportation system, the basic means of lowering domestic crude oil requirements, result in

expenditures which appear as growth factors in the most important business and national economic figures. However, the cost of this growth must not be overlooked. Almost nothing is added in terms of steadfastly affirmed "social progress." This growth results in economic crisis management which leads to an overall substantial reduction in the standard of living. Therefore, with this kind of growth and the second one mentioned, one must guard against recklessly concluding that there is economic prosperity based on official figures.

#### Lower Quality of Consumer Goods

The fourth and last source of growth we will deal with here is represented by those growth rates which can be attributed to state-sanctioned reductions in quality, the lowering of the price-performance ratio. This concerns, for example, reductions in the fat content of butter, cream and milk and lowering the quality standards for meat products. These "stretching regulations" have been in effect since the second half of the 1970's because cancelled imports of fodder concentrates and grain had a negative effect on animal husbandry, affected the maintenance of ~~syne~~ herds and reduced average annual milk production per cow in top herds.

Comparable are the efforts in the textile and clothing industry to produce more square meters of fabric with no longer increasing supplies of raw materials (cotton, for example) by reducing the material weight per area, making the weave less dense and (or) eliminating the special treatment which prevents subsequent shrinking of the fabric. Here too, as in the other examples, the consumer has to bear the loss. Growth in terms of production figures is therefore at the expense of the population.

#### Summary

The GDR leadership sees itself confronted today and during the next few years with difficult tasks in terms of economic policy. As a result of its formerly self-imposed shortage of foreign currency with regard to the West (between 1970 and 1974 the trade deficit between GDR and the Western industrialized nations had already increased by a good 1.5 billion valuta marks to more than 12 billion valuta marks, corresponding to nearly 1.5 times the GDR exports to this area in 1974), and of subsequent international economic influences, the GDR leadership decided to depart from a structural policy which had been introduced 20 years earlier to encourage increases in productivity, enlarge the amount of capital, protect the environment, etc. This did not happen because the growth potential in the petrochemical industry slowed down in the meantime and more progressive alternatives were promoted. Rather, the prevailing internal political and economic situation at the time induced the policy makers to further restrict the consumption of crude oil and to fill the supply gap thus created by using, until further notice, raw brown coal which is less profitable in all respects. Or to put it another way, in the interest of political and economic self-preservation and contrary to all of their own official statements on the new growth model, the GDR decision-makers are introducing broad-based, expanded economic growth into national economic structures in which any additional "progress" can really only be seen as social regression.

Public pronouncements by officials regarding qualitative economic growth are also not in line with export requirements to Western countries resulting from the trade deficit (up to 1983 the deficit was about 30 billion valuta marks). To have to export in order to achieve at all costs a certain volume of foreign currency, not waiting for real market opportunities but rather depending on "immediate payment in exchange for goods," favors the entrenchment of an export structure for goods based on mass turnover of cheap, material-intensive products. The well-known crash actions in Western markets, which the GDR continues to initiate with mineral oil products, articles from light industry and the foodstuffs sector, the furniture industry and household electrical devices (because products in these sectors can be sold at low prices and involve relatively low risk), promote these trends toward greater material consumption and will thus also certainly thwart efforts toward qualitative economic growth in the next few years.

The existing, continually increasing disparity between the amount of money the population has and the assortment of goods on which they can spend it has a similar effect. Latent shortages of goods and surplus demand encourage and force producers to supply products which are lower in quality, of a substandard technical level and in an assortment which is outdated. To give an example, at a constant price level the technical quality standards for the production of stockings were changed to eliminate heel and toe reinforcement in the interest of increasing productivity and conserving material. The results are that the utility value of the product is lowered, the stockings wear out faster and new ones must be purchased more frequently. The producing enterprise, the dealers and the ministries in charge increase their economic figures but do so at the cost of increased material consumption and thus also with the aid of expanded economic growth.

On the other hand, the economic interests of the GDR, a country poor in raw materials, are well known and require serious efforts to find a way to achieve qualitative economic growth which, from the quantitative point of view, can be and is compatible with stagnant production figures. The numerous statutory provisions and regulations which have been passed since 1982--during the course of the current five-year plan--to pave the way for this new type of economic activity could be viewed as an indication of serious efforts. At the same time administrative supervisory agencies have expanded in parallel with these economic regulations; this alone points out the concern that there is either a lack of conviction as to the effectiveness of the regulating mechanisms instituted or that constant adjustments will have to be made wherever, due to "extraordinary considerations," the new economic quality demanded by the regulations cannot, or perhaps not yet, be met.

Doubts about the effectiveness of capital-conserving economic growth are indicated. The explanations provided by the GDR national leadership in conjunction with the 35th anniversary of the founding of the GDR are not completely honest in their assessment of the actual performance level achieved. The self-imposed compulsion to succeed stands in the way of taking stock in a more subdued fashion and being more reserved in the use of the term "qualitative economic growth." It is not surprising when the attempt is made to prove that new horizons have opened up in terms of new quality levels achieved in the



automotive area. In numerous publications reference is made to the 44 automobiles currently owned by every 100 households. There is no word, however, about the stagnant or even declining supply of automobiles to the public since 1976 or that nearly 50 percent of all private automobiles are more than 10 years old and that nearly 7 percent have been traveling the GDR's highways for more 25 years.

Does a country which hides behind such flagrant propaganda tricks really have the desire and the strength to make a new beginning?

#### FOOTNOTES

1. DIW-WOCHENBERICHT, Vol 32/1984 of 9 Aug 1984, p 391.
2. Ibid., p 392.
3. A. Antschischkin, "Expanding Production Under Conditions of Developing Socialism" [in Russian], KOMMUNIST, Vol 14/1976, Moscow, pp 44-55.
4. M. Banaschak, "Ueber Wachstum und Fortschritt" [On Growth and Progress], EINHEIT, Vol 9-10/1984, p 891.
5. H. Koziolok, "Ueber das Wachstum unseres Nationalreichtums" [On the Growth of our National Wealth], EINHEIT, Vol 9-10/1984, p 874.
6. This includes, for example, the decision to permit railroad freight shipments between the GDR and the Soviet Union without going through Poland and to create for this purpose by the fall of 1986 a railroad ferry line between Mukran (Ruegen) and Klaipeda (Lithuania). It will take a labor force of about 2500 working 4 1/2 years to complete the harbor installation (consisting of a switching hall, crane installations and a two-story transporter bridge) on the GDR side. The Mathias-Thesen shipyard in Wismar will build the six ferries which will each have a carrying capacity of 11,700 metric tons dead weight and will be 185 m long. DEUTSCHLAND ARCHIV, Vol 5/184, pp 457 ff.
7. The authorities are obviously reckoning with longer time periods for burning pure raw brown coal because the Schoenebeck Heizkesselwerk (Furnace Works) has developed a new furnace for schools, kindergartens and hospitals which can easily burn raw brown coal with a moisture content of up to 55 percent (NEUES DEUTSCHLAND of 22 Nov 1984, p 1).
8. About 1.7 billion cubic meters of groundwater are removed or drawn off annually from the more than thirty new or existing open-pit mines. This quantity of water (amounting to about one third of the water used annually by industry) equals the capacity of all of the GDR's 190 dams and reservoirs (NEUES DEUTSCHLAND of 27 Aug 1984, p 3). In reality the relationship is even less favorable because the raw brown coal itself contains up to 50 percent water, thus making the actual groundwater losses much higher still. Ten to fourteen metric tons of water are lost in the drying of one metric ton of raw brown coal.

9. According to DIW there are about 300 industrial and heat-producing power plants in the GDR and nearly 21,000 industrial furnaces (see DIW pilot study on the preparation of a SO<sub>2</sub> emissions record for the GDR geographical area, Sep 1983).
10. According to the estimates of GDR experts, which are probably too low, desulfurization in GDR power plants costs about 10 million marks (TAGESSPIEGEL, Vol 11,863, p 3).
11. "Die Entwicklung des Sozialismus und die Landwirtschaft" [The Development of Socialism and Agriculture], PROBLEME DES FRIEDENS UND DES SOZIALISMUS [Problems of Peace and Socialism], Vol 7/1983, p 932.

12552

CSO: 2300/399



HUNGARY

TRADE WITH U.S. DISCUSSED

Budapest HETI VILAGGAZDASAG in Hungarian No 16, 20 Apr 85 pp 37-38

[Interview with Joseph F. Dennin, Deputy Secretary of Trade, by Richard Hirschler: "Opinion from the Other Side of the Ocean." Place and date not given.]

[Text] The joint Hungarian-American economic and trade committee met last week in Budapest under the joint chairmanship of Deputy Minister of Foreign Trade Tibor Melega, and Deputy Secretary of Trade Joseph F. Dennin. The current questions of the two countries' trade relations were discussed with the head of the American delegation.

[Question] What were the controversial issues at the meeting?

[Answer] There are no special problems in the two countries' economic relations. But the Hungarian party noted that it would be good if the legislation of the United States would renew Hungary's most favorable status, which in actuality means the application of the same customs policy that is applied to other countries, not from year to year but, say every five years. Otherwise it is difficult for the enterprises to make longer-range plans. We indicated that we do support the Hungarian question in principle but for this our Congress would have to change the trade law which is not to be expected in the near future. The Hungarian party also urged for more flexibility in American export licensing; they say that many Hungarian enterprises do not even initiate talks to purchase modern technologies for fear of being denied the license to buy.

[Question] And what did the Americans say to this?

[Answer] We indicated that the concrete Hungarian complaints that were raised will be examined and at the same time we informed the Hungarian partners that there are appropriate official and non-official ways for licensing the sales of technological equipment. Thus when a Hungarian enterprise wants to purchase equipment and technologies, the matter of license is easy to clear. We also mentioned a few factors that stand in the way of the expansion of trade relations. We think intercompany cooperation could be much stronger if American businessmen were able to supervise their enterprises locally, in Hungary. But what should the

companies do when they are unable to acquire an office or apartments in Budapest or if they must pay excessive rents? In addition, bureaucracy also makes their operations difficult. For this reason they prefer to set up offices in Vienna from where they manage their East-European or Hungarian operations. And this is not the same as being present directly at the market. I would mention one more thing: generally, Hungarian enterprise representatives do not make use of the services offered by the trade section of the U.S. embassy in Budapest where Hungarian enterprises could get valuable business information.

[Question] None of this explains, however, why the proportion of machines and equipment in Hungarian purchases is so low, hardly reaching 25 percent.

[Answer] A well-developed trade of technology is based on mutual business interests of the parties and this has been difficult to coordinate. But to mention a recent example, the Hungarian agricultural airborne service just purchased a small Hughes helicopter, reserving 10 other ones for option. Hughes Aircraft seems to be willing to give to Hungary the production technology of its small helicopter, and the assembly could be started in Hungary within the framework of cooperation. Speaking of helicopters, why could not Hungary purchase or rent American-made passenger airplanes as well...

[Question] What do you think the chances of Hungarian enterprises are this year on the American market?

[Answer] I must say, they will be in a more difficult position than last year, the dollar being already weaker and probably becoming even weaker. Some enterprises will find that business deals that were very lucrative last year are not going to be profitable this year. This is why Hungarian enterprises should, through good marketing, advertisement and the organization of consumer services, establish a foundation for their future activities now when the dollar is relatively strong.

[Question] My information is that you will also accompany Secretary of Trade Baldrige in the Soviet Union where the two countries' joint economic committee will meet on 30 May. What do you expect from these meetings?

[Answer] Since 1978, this will be the first ministerial-level American-Soviet trade meeting. Evidently, we would not sit down to talk if we did not expect concrete results. I think, trade in non-strategic products and technologies is expected to be expanded significantly since bilateral trade already reached six billion dollars last year.

#### Hungarian Surplus

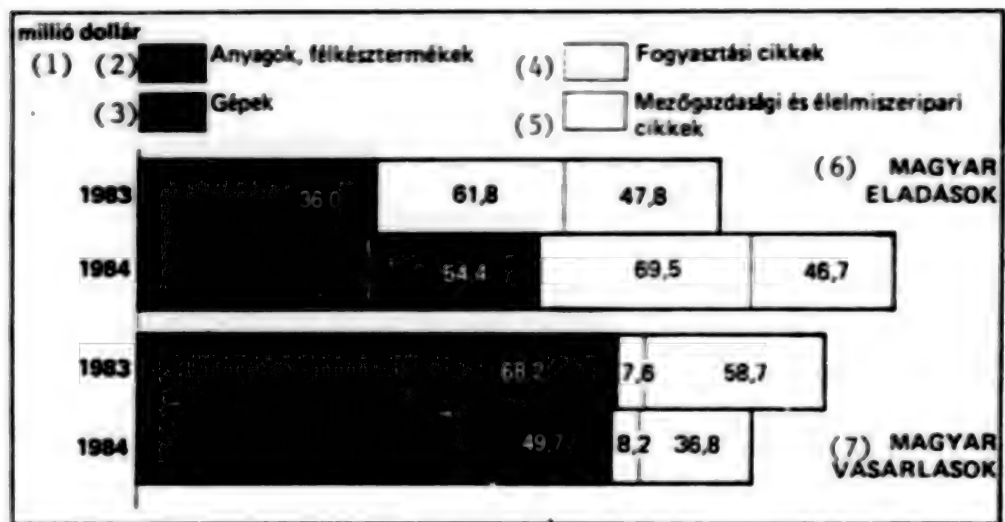
It was the first time last year that a significant (60 million dollars) Hungarian export surplus was recorded in Hungarian-American trade. The largest increase came in the deliveries of Raba running gear and spare

parts but the exports of rolled products and semi-finished aluminum products also increased. New kinds of salami were introduced on the American market, and the sale of textile products increased as well. Of course, the dollar's high exchange rate played an important role in this.

What was beneficial for the Hungarian exporters was much less beneficial for the American exporters: the strong dollar made the American products too expensive for the Hungarian buyers. This is why, for example, the imports of soy from the United States decreased in volume. This is what happened with the imports of American machines, especially chemical and agricultural machines. On the other hand, the imports of chemical products, electronic parts and instruments had a further increase.

The imports of a few modern types of machines and part units were still hindered by American export licensing policies. Bilateral trade is still concentrated to a few enterprises. Half of the annual Hungarian sales is made up by deliveries of part units of Raba utility vehicles, by the exports of canned ham and salami by the Terimpex, by the Mogurt-Ikarus cooperation in assembling articulated busses, and by the American manufacture and exports of Tungstam light bulbs. Last year a new Hungarian-American joint company was established in the service sector: the Skala-Coop and the American Writing Company started a new enterprise under the name Fotex which offers phototechnical service, primarily developing films.

# Development and Distribution of Hungarian-U.S. Trade (in Million Dollars)



A magyar—USA kereskedelem alakulása, összetétele (millió dollár)

## Key:

1. Million dollars
2. Materials, semi-finished products
3. Machines
4. Articles of consumption
5. Agricultural and food industry articles
6. Hungarian sales
7. Hungarian purchases

9474

CS0: 2500/356

HUNGARY

HUNGARIAN-USSR COOPERATION PROGRAM UNTIL 2000

Budapest FIGYELO in Hungarian No 19, 9 May 85 pp 10-11

[Text] On 1 April, in Moscow, Gyorgy Lazar, Prime Minister, and Goydar Aliyev, first deputy chairman of the Council of Ministers, signed the long-range program, extending to the year 2000, for economic and scientific-technical cooperation between Hungary and the Soviet Union. We publish the text below.

Regarding the resolutions of the congresses of the Hungarian Socialist Workers' Party [MSZMP] and of the Communist Party of the Soviet Union and the agreements come to in the course of the meetings of the first secretary of the MSZMP and the first secretary of the CPSU CC as a guide and in harmony with the provisions of the Treaty of Friendship, Cooperation and Mutual Aid between the Hungarian People's Republic and the Union of Soviet Socialist Republics signed on 7 September 1967 and relying on the economic and scientific-technical capacity of the two countries and on the achievements of the successful development of economic and scientific-technical cooperation between the MNK and the USSR and on the experiences obtained in the course of the practical realization of the long-range program, extending to 1990, for the development of manufacturing specialization and cooperation between the MNK and the USSR and taking into consideration the tasks of an intensification of the national economies, of an acceleration of scientific-technical progress and of a further increase in the prosperity of the peoples of the two countries, starting from the resolutions of the June 1984 High Level Economic Conference of CEMA Member Countries pertaining to the further development and modernization of cooperation, to a long-range and lasting deepening of manufacturing specialization and cooperation and to an expansion of mutual trade, exploiting the experiences of working out the chief trends of social-economic development in both countries for 1986-1990 and extending to the year 2000, and convinced that the many-sided fraternal cooperation of the MNK and the USSR and a deepening of the international division of labor serve to strengthen the unity of the countries of the socialist community and are important factors in the struggle to strengthen peace and international security, the Hungarian People's Republic and the Union of Soviet Socialist Republics have adopted the present long-range program for the development of economic and scientific-technical cooperation between the MNK and the USSR extending to the year 2000.

## I.

Contacts between the MNK and the USSR are developing dynamically and fruitfully in every area of political, economic, scientific and cultural life on the basis of the principles of Marxism-Leninism and socialist internationalism. This corresponds to the fundamental interests of the Hungarian and Soviet people and aids the successful solution of the tasks of building and further developing a developed socialist society in both countries. A determining factor in the development of Hungarian-Soviet contacts is the close link between the MSZMP and the CPSU, which is characterized by mutual trust and a unity of views in all the most important questions of our age.

Exploiting the advantages of a planned economy and the possibilities of mutual cooperation, the MNK and the USSR have strengthened their economic and scientific-technical capacity, raised the material and cultural standard of living of their populations and created the conditions for a further development of the economy and an expansion of mutual cooperation in order to turn the economies of both countries onto the intensive path of development.

The long-range program for the development of manufacturing specialization and cooperation between the MNK and the USSR adopted in 1980 and extending to 1990 has played an important role in deepening the economic and scientific-technical cooperation.

The Soviet Union is the most important economic partner of Hungary. Hungarian-Soviet cooperation has a significant effect on the modernization of the economy of the MNK, especially of its industry, on the dynamic growth of the economy and on expanding its export possibilities.

The Soviet deliveries of fuel, raw materials, energy, modern equipment and material make it possible to satisfy a significant part of the Hungarian import needs and, taking into consideration also the MNK's own resources and the sources gained by virtue of enterprises and other installations created in the MNK with the technical cooperation of the USSR, they create the possibilities for the successful development of the Hungarian economy. The lasting orders of the Soviet Union, significant in regard to their size, create a good foundation for the organization of large volume, efficient, specialized manufacture.

The delivery of some products of the Hungarian machine industry to the USSR contributes to a fuller satisfaction of the need for foodstuffs industry, heavy current industry, transportation and communications equipment. The deliveries of agricultural, foodstuffs industry and industrial general need articles make it possible to improve the supply of these products to the population in the Soviet Union.

The High Level Economic Conference of CEMA Member Countries has opened new possibilities for modernization of the economic cooperation of the MNK and the USSR, and all fraternal countries, and for the mutual effects of their economies. The resolutions of the conference designated the chief trends for the strategy of economic development and for deepening the international



socialist division of labor. This agreement is of great significance, because it takes a new step in deepening the harmonization of economic policies in areas interdependent with mutual cooperation in the interest of a joint working out of solutions of economic tasks of great significance and of mutual interest.

The Hungarian People's Republic and the Soviet Union are striving to aid to the greatest possible extent the cooperation within the framework of the Organization of the Warsaw Pact and the Council for Mutual Economic Assistance, actively participating in the realization of the resolutions and guiding principles adopted at the High Level Economic Conference of CEMA Member Countries and other agreements concerning multilateral economic and scientific-technical cooperation.

The chief goal of Hungarian-Soviet cooperation is to contribute actively to a many-sided improvement in the prosperity of the peoples of both countries, to an ever fuller satisfaction of their needs and to a strengthening of their friendship and fraternal alliance.

An increasing role in the realization of the coordinated guides for mutual cooperation is being played by the coordination of the state plans of the MNK and the USSR, by the use of new, effective forms of economic and scientific-technical cooperation, by a broad development of production cooperation, and by the development of direct contacts between the associations, enterprises and scientific organizations of the two countries.

The MNK and the USSR are extending the harmonization of economic policies in areas of mutual interest interdependent with economic cooperation for the purpose of solving the developmental tasks of the fuel, energy and raw material supplies of their economies, the agricultural-industrial complex, the stressed machine industry branches, microelectronics, robotics, manufacture of industrial general need articles and other branches of the economy.

Taking into consideration the objective economic conditions of the MNK and the USSR the new ideas pointed out in the development of many-sided economic and scientific-technical cooperation and in increasing their economic mutual effect will serve as a guide for the development of the production structure of economic branches having mutual contact with one another and for the development of the directions of long-range mutual cooperation.

The MNK and the USSR feel that in the interest of an intensification of the economies of the two countries and in the interest of realizing the goals of Hungarian-Soviet cooperation, the uniting of efforts must become a key factor for the purpose of a broad and efficient utilization of the newest scientific-technical achievements and intellectual and material technical resources.

Taking into consideration the chief trends of scientific-technical progress and the chief requirements of long-range social-economic development, the stressed areas of cooperation are the following:

--the spread of electronics in the economy with broad application of microelectronics and computer technology, which will make possible a substantial increase in the productivity of social work and an acceleration of scientific-technical development in all branches of the economy, including non-producing areas;

--complex automation by the prospective creation of flexible manufacturing systems equipped with digitally controlled systems and highly productive industrial robots, which will aid the optimal utilization of capacity and decrease the needs of production for tools, material and live work;

--development of nuclear energy at an accelerated pace, for producing electric power and supplying heat, and on this basis a moderation of the proportion of hydrocarbons in the fuel-energy balance;

--creation and introduction of new materials and technologies, for the purpose of increasing the efficiency of the exploitation of raw material sources, substantially reducing the needs of production for energy and material and increasing the productivity of labor;

--development of biotechnology and a broad introduction of the results of biotechnological research into industry, agriculture, medicine and in the course of carrying out environmental protection measures, for the purpose of producing efficient feeds for animal husbandry, creating efficient biological tools for the struggle against pathogenic organisms, increasing the yields of crops and the breeding and weight gain of animals and creating highly productive agricultural technologies and more effective pharmaceutical preparations.

The MNK and the USSR are paying special attention to the development of basic research and the economic utilization of its results, to the scientific-technical capacity of the two countries, to strengthening its mutually complementing character, to developing an efficient division of labor and cooperation in the area of scientific research and technical development and to strengthening the material-technical base for scientific research.

In the area of production Hungary and the Soviet Union are concentrating their attention on a further development of mutually advantageous manufacturing specialization and cooperation, strengthening the material base of the economy by a broad introduction of modern, highly efficient technological processes, machines, equipment and materials, on a rational use of production capacities, conserving labor and material resources and improving the quality of products.

Exploiting the possibilities of their countries, the two sides are creating conditions for expanding joint action on third markets, among other things for the export of their technologies and complete equipment.

The two sides are striving to see that complex cooperation embracing research and development, production, marketing and service after sale should receive an ever greater role in their cooperation.

Taking into consideration the fact that the modernization and development of the producing and non-producing infrastructure are receiving great emphasis in the long-range economic development of both countries, the two sides agreed that the solution to this task must be aided by every means.

## II.

1. In the course of a further expansion and deepening of Hungarian-Soviet economic and scientific-technical cooperation the sides will focus special attention to the following:

--in the future also, to conducting a harmonized, in some areas a uniform, scientific-technical policy, in the interest of solving with common strength as soon as possible the most important scientific-technical problems of mutual interest;

--to development of cooperation aimed at laying the theoretical foundation for scientific-technical progress, to strengthening basic research and to solving the most important tasks ensuring world level achievements in regard to technical-economic factors;

--to rational use of natural resources, primarily fuel, raw material, energy sources and production and scientific-technical capacity, including a modernization of the production structure meeting the interests of both countries, economical use of materials, fuels and energy and a broad spread of modern waste-free technologies;

--to an accelerated economic exploitation of scientific and technical achievements, and to creating harmony between economic and scientific-technical cooperation;

--to carrying out the provisions of the economic and scientific-technical state programs to be realized in the MNK and the USSR and the provisions of the complex program for scientific-technical development of the CEMA member countries extending for 15-20 years;

--to solving scientific-technical problems in those areas of industrial production where there are realistic preconditions for expanding production specialization and cooperation which will aid a further increase in mutual commodity deliveries;

--to increasing the technical level, quality, competitiveness, and esthetic and ergonomic level of products manufactured in the two countries;

--to the development of uniformity and standardization, taking multilateral cooperation into consideration, in the interest of increasing the economy of production and a further expansion of mutually advantageous manufacturing specialization and cooperation;

--to modernization and reconstruction of industrial and other installations, e.g. those created within the framework of cooperation, in the interest of increasing their technical level and the intensification of production;

--to unification of measurement norms and methods for the purpose of a further development of the measurements base of the economies of the two countries;

--to creating uniform tools and methods for the purpose of quality control of technological processes and products;

--to protecting the natural environment and to creating and using the efficient methods and tools necessary for environmental protection.

The two sides will perfect their cooperation in the purchase and use of licenses and know-how and will work out measures for the further development and modernization of cooperation in the area of scientific-technical information and to expand the mutual exchange of available information about scientific-technical achievements.

2. In the machine industry, constituting the most important material base for technical progress in every branch of the economy and for increasing the efficiency of social production, the cooperation will be directed at the following:

--to rational exploitation of the machine industry capacity of both countries and to a further development of this capacity in accordance with mutual interests in the interest of solving those complex tasks which are of outstanding significance from the viewpoints of the economies of both the MNK and the USSR;

--to measures aimed at improving the technical level and quality of mutually delivered machines and equipment, in accordance with the requirements of scientific-technical progress;

--to increasing complex mechanization and automation by a broad spread of electronics and computer technology in production processes and in the area of the non-producing sphere;

--to creating and introducing manufacture of new technological processes, machines, equipment, subassemblies and parts, corresponding to the technical world level, which will make possible, primarily, conservation of energy, raw and primary materials, a high level of processing of raw materials and utilization of waste and secondary raw materials;

--to the development of lasting specialized and cooperative manufacture of uniform subassemblies and parts--including cooperation within a branch--for the purpose of mutual deliveries of them.

The MNK and the USSR will cooperate in the creation, initiation of manufacture and mutual delivery of the following machines, equipment and technologies:

--active and passive electronic parts, electromechanical elements and optoelectronic products, very highly integrated components and a new generation of standardized microelectronic devices based on progressive physical principles; especially pure primary and auxiliary materials needed by microelectronics; various microelectronic products, manufacturing technologies



for large and very complex integrated circuits; new types of highly productive special technologies and testing equipment needed to design, assemble and test very complex integrated circuits;

--radioelectronic equipment on the basis of an element base to be worked out jointly, devices for magnetic recording of video and audio information, a new generation of uniform elements for use in micro equipment; instruments and automated devices for scientific research;

--electronic computers and computer systems, control computer complexes, the subassemblies and peripherals for them, technical devices for the uniform computer system and minicomputer system of the CEMA member countries and the software needed to operate them;

--automated data collecting, transmitting, processing and storage systems based on small computers which can be widely used in the economies of the two countries; computer networks, remote data processing systems and devices;

--light conducting devices--including laser--used in instruments, machines and equipment and in technological processes;

--certain devices for the common, automated communications system of the CEMA member countries, including automatic electronic telephone exchanges; wireless (UHF, microwave, earth and space station) and landline (including fiber optics) transmission technology equipment; TV and radio broadcast devices, systems and equipment; multichannel, super high frequency equipment and electroacoustical devices;

--flexible manufacturing systems based on equipment with digitally controlled systems, robots and robotized complexes, and the subassemblies to complete these;

--highly efficient, modern working methods in the metal processing industry, to increase the productivity of the equipment and the precision, life expectancy and wear resistance of parts and subassemblies;

--new types of machines and equipment, control and communications systems for the raw material and energy producing industrial branches, for agriculture, for the production of foodstuffs industry products and general need industrial articles, for the construction, construction materials and road construction industries, for the chemical industry, petrochemical industry, petroleum processing industry and electrotechnical industry;

--complex mechanization and automation equipment for lifting, moving, loading and warehouse jobs in industry, the construction industry, agriculture and transportation;

--a new generation of passenger cars, trucks and autobuses, as well as air, rail and water vehicles with high technical-operational indexes in regard to fuel conservation and ecological characteristics;

--new medical instruments, equipment, signaling devices and automatic devices using microelectronics for screening examinations, diagnosis of diseases and treatment of patients.

The two sides will build deeper and more lasting production cooperation contacts in the auto industry, in the manufacture of tractors and agricultural machines, in nuclear energy machine manufacture, in the instrument industry, in computer technology, in machine tool manufacture, in the production of industrial robots, in microprocessor technology and in the manufacture of other machine industry products and they will participate in the construction, reconstruction and technical renovation of machine industry enterprises.

They will turn priority attention to supplying spare parts and technical services for mutually delivered machines and equipment.

For the purpose of producing favorable conditions for the development of manufacturing specialization and cooperation, the sides have agreed that they will continue the complex standardization and uniformization of the products provided and will further the compatibility and exchangeability of products on the basis that they should develop, in cooperation with other CEMA member countries, uniform machine systems, equipment and instruments at a high technical level.

3. The MNK and the USSR feel that the most important strategic task is cooperation in supplying the economies of the two countries with fuels, energy and raw materials, which can be solved by mobilizing their own resources and by strengthening mutual cooperation.

In the interest of this the MNK and the USSR will realize complex measures which will be directed primarily at using fuels, raw materials, waste and secondary raw materials economically and rationally and decreasing the energy and material needs of production by introducing leading technological processes and modern machines and equipment, and changing the production and use structure of raw materials and fuels. At the same time, they will take appropriate measures to develop cooperation in the area of production and mutual delivery of fuels, energy and raw materials.

In order to create the economic conditions which will ensure the realization and continuation of deliveries of a number of raw materials and fuels from the Soviet Union to satisfy the import needs--in volumes to be determined on the basis of plan coordination and long-term agreements--Hungary will gradually and consistently develop its production and export structure within the framework of a coordinated economic policy, and will take the necessary measures in the area of investments in its industry and in the area of the reconstruction and modernization of industry so that it can deliver the products needed by the Soviet Union, including foodstuffs, general industrial general commodities, certain structural materials, and outstanding world quality machines and equipment, participating in the creation of capacity for certain extractive industry branches. Mutually acceptable solutions in connection with these questions will be developed, taking into consideration the objective economic conditions of the MNK and the USSR and the structure of the production and mutual trade of the two countries, in such a way that the



expenditures to be involved will result in mutually advantageous compensation and will make possible a further deepening of long-term manufacturing specialization between the MNK and the USSR.

The long-range cooperation in the area of energy will be directed primarily at increasing the reliability of the parallel operation of the united electric power systems, perfecting the technological processes for heat and electric power production--among other things by cooperation in the construction of nuclear power plants and later in the creation of nuclear heating plants--creating and modernizing new progressive nuclear power plant equipment, instruments and process control systems, improving the fuel structure and developing economical technological processes and highly productive equipment which will aid in the greatest possible reduction of specific fuel and energy use.

The two sides will cooperate in the perfection of coal and lignite mining methods and technologies, in complex automation of mine operations, in developing the equipment necessary for wide use of compressed and liquid gas as a motor fuel, in the ever fuller utilization of secondary fuels, including low calorific value fuels, and in optimization of energy use in energy demanding manufacturing processes, among others in metallurgy, the chemical industry and in the manufacture of construction materials (the manufacture of brick, cement, lime and glass).

4. In ferrous and nonferrous metallurgy the cooperation will be directed at modernizing the technology and structure of metallurgical production, at improving the quality and variety of the products manufactured, and at increasing the production of outstanding quality steels and other materials, for the purpose of a fuller satisfaction of the needs of the processing industry of the two countries. The MNK will participate in the development of iron bearing raw material extraction and enrichment capacities in the USSR, so that the Soviet deliveries of these raw materials can be realized and continued. By deepening and expanding specialization the two sides will expand their ferrous and non-ferrous metallurgy product exchange.

The two sides will conduct alumina-aluminum industrial cooperation with mutually advantageous conditions.

The MNK and the USSR will cooperate in construction, reconstruction and modernization of the ferrous and non-ferrous metallurgy plants of the two countries.

The USSR will participate in geological prospecting for non-ferrous metals in the MNK.

The two sides will cooperate in creating and introducing technologies serving high level processing and economical utilization of raw materials and materials in the area of ore enrichment, in coke-free metallurgy, in development of new methods for high-alloy steel manufacture and new, more perfected and more effective alumina and aluminum manufacturing processes.

5. In the chemical industry and petrochemical industry the chief attention will be directed at deepening and expanding the production and mutual delivery cooperation which has developed on the basis of manufacturing specialization and cooperation for the technologies and equipment needed to produce crop protection materials, artificial fertilizers, olefines and olefine products, synthetic rubber goods, petrochemical products, chemical reagents and especially pure materials, lacquer and paint industry materials and photochemical products. The MNK and the USSR will continue to strive to develop new cooperation in the manufacture of other chemical industry and petrochemical products. The two sides will cooperate in the development and exploitation of modern technological processes and equipment resulting in a higher level and economical processing of raw materials and materials.

In the pharmaceutical industry the two sides will continue cooperation in research, in development of new technologies, and in manufacturing specialization and cooperation.

The two sides will coordinate the investments prescribed in the chemical industry and petrochemical industry in the two countries and will participate in the construction and reconstruction of the corresponding enterprises for the purpose of a fuller satisfaction of the economic needs of the MNK and the USSR appearing in the several chemical industry products.

6. The cooperation of the two sides in the manufacture of general need industrial articles will be directed at carrying out the measures aimed at strengthening the raw material base needed for the manufacture of these products, at increasing the more sought after goods and fashionable products, and at expanding their manufacturing specialization, cooperation and mutual deliveries of goods at the world level. They will turn special attention to expanding cooperation in the manufacture of high quality, durable consumer goods with a future, recreational electronic devices and service instruments for them, to standardization of products on the basis of uniform subassemblies and parts, and to adopting progressive manufacturing technologies, new materials, and uniform technological process and product quality control devices and methods.

The two sides will continue cooperation in the technical renovation and reconstruction of the light industry and popular supply enterprises of the USSR, and for this purpose will expand contacts in developing and introducing modern technological processes and adopting the manufacture of progressive machine and equipment systems.

The two sides will cooperate in the development of the auxiliary materials and decorative accessories needed to produce high quality chemical materials and general need industrial articles.

In the interest of expanding the exchange of consumer goods they will use various forms of cooperation, including an exchange of assortment between domestic trade, consumer cooperatives and department stores.

7. In the branches of the agricultural-industrial complex the two sides regard the most important task to be a many-sided development of these

branches and the cooperation being realized in this area. They will direct their efforts to increasing the production and mutual deliveries of foodstuffs on the basis of the introduction of modern technologies and development and modernization of the material-technical base for agriculture and the foodstuffs industry.

The two sides will direct their efforts primarily at expanding cooperation in the areas of improving the genetics and breeding of seed and propagation materials and high yield poultry and live-stock and at developing and introducing high efficiency industrial type technologies, on the basis therein of use of biotechnology methods aiding an intensification of crop production and animal raising. They will develop and adopt new crop protection materials (pesticides) not harmful to man or the environment; they will develop and start manufacture of machine and equipment complexes for harvesting agricultural products, for processing after harvest, for waste free processing and storage, and for the automation of animal and poultry complexes. They will expand the exchange of experiences in connection with decreasing losses arising during production, storage, transport and processing of agricultural and foodstuffs industry products, in connection with complex utilization of these products without loss and in questions of the further modernization of the organization and guidance of agricultural-industrial complexes.

The two sides will cooperate in the development of their manufacturing capacity for new veterinary preparations and microbiological products and in the modernization and reconstruction of the enterprises of the branch.

The MNK will participate in the reconstruction and technical renovation of the foodstuffs industry and agricultural enterprises of the USSR.

The two sides will cooperate in the development of complex irrigation and soil working systems for the purpose of preserving and increasing the productive capability of the soil and preserving the ecological balance through use of the results of earth remote sensing and space research tools in agriculture.

8. In the area of transportation the two sides will take united measures in the interest of meeting the growing volume of foreign trade freight and passenger traffic. These measures prescribe:

--a rational distribution of foreign trade goods among the transportation branches;

--better exploitation and development of the material-technical base of the transport systems of the MNK and the USSR in connection with fulfillment of mutual and transit freight (taking into consideration the seasonal inequalities and the changes in the structure of freight), including closer cooperation between the transportation organizations of the countries, increasing the capacity of rail border stations and Danube ports, optimal exploitation of highway freight and modernization of the technical park;

--harmonization of investments in the area of a development of the transport net of the two countries (in regard to the time limits for completion and putting into operation of projects of mutual interest);

--increasing foreign trade freight using large load containers, unit packages and loading pallets, in order to increase the economy of deliveries and better protect the shipped goods;

--development and introduction of new technologies, including technologies which do not require reloading, in regard to all methods of shipment and use of automated guidance systems for shipments;

--improving international passenger service for the purpose of reaching a level meeting modern requirements.

8. The MNK and the USSR will take the necessary steps to further expand mutual trade on the basis of more extensive division of labor, among other things through a development of manufacturing specialization and cooperation.

The exchange of goods trade must be expanded primarily through a mutual exchange, in ever increasing volumes, of products determining scientific-technical progress having a high degree of processing of raw materials and materials.

The interweaving at many levels of the economies of the MNK and the USSR, the lasting character of the contacts and the growing ratio of specialized and cooperative deliveries all increase the responsibility of the two sides in meeting their mutual obligations.

For the purpose of aiding an expansion of the exchange of goods trade between the two countries the two sides will take steps to further perfect foreign trade activity and increase its efficiency, among other things, by focusing attention to improving technical services for mutually delivered goods and improving the mutual exchange of trade information.

For the purpose of expanding mutual trade the two sides consider it necessary to strengthen the links between the small border trade and domestic trade, among consumer cooperatives and between the chambers of commerce.

The development of economic contacts and mutual trade between the two countries must be realized with a balancing of the payments contacts.

The two sides will develop their cooperation in the area of tourism.

### III.

The Hungarian People's Republic and the Union of Soviet Socialist Republics have agreed that the long-range program, extending to the year 2000, for the development of economic and scientific-technical cooperation between the MNK and the USSR will be realized in accordance with the following:

--with harmonization of the most important trends of economic and scientific-technical policy in questions of mutual interest in the areas of planning, science, technology and production; with a strengthening of the direct cooperation of the planning and branch organs of the two countries;



--with coordination of the 5-year plans and, in areas of mutual interest, of long-range plans;

--with coordination of investment plans in areas of mutual interest;

--by working out branch programs for the development of economic and scientific-technical cooperation, extending to the year 2000, and by working out appropriate measures;

--by signing manufacturing regulation and cooperation, scientific-technical, cooperation, and mutual delivery agreements and contracts and economic and technical cooperation agreements and contracts for the construction, reconstruction and modernization of industrial and other projects;

--by signing foreign trade civil law contracts and economic agreements;

--by expanding and deepening the direct production and scientific-technical contacts between the appropriate organizations and organs of Hungary and the associations, enterprises, ministries and organs with national authority of the USSR, the ministries and organs of the Soviet federal republics, the Academy of Sciences of the USSR, and the academies of science of the Soviet federal republics;

--by creating joint producing and scientific-producing enterprises on a self-accounting basis, joint collectives of scientists and experts, planning-editing offices and other international management and scientific organizations;

--by exchanging--on commercial basis--scientific-technical documentation, licenses and know-how.

The MNK and the USSR will incorporate their obligations in connection with realization of the present long-range program into the long-range, 5-year and annual state plans and plans of ministries, associations, enterprises and organizations in accordance with the system valid in the two countries.

The active participation of the MNK and the USSR in fulfillment of the integration measures and multilateral agreements among the CEMA member countries will aid the realization of the provisions of the long-range program. In the course of realizing their cooperation the two sides will take into consideration the documents adopted within the framework of CEMA.

The present long-range program embraces the fundamental directions of cooperation between the two countries and in the course of its realization the two sides can supplement it and make it more precise on the basis of mutual agreement.

The organization of the execution of the long-range program and supervision of the course of the work will be performed by the Hungarian-Soviet Economic and Technical-Scientific Cooperation Inter-Government Committee, which, together with the central planning and scientific-technical organs and other ministries and organs with national authority, will aid in working out new proposals as



necessary pertaining to questions of a further development of friendly relations between the Hungarian People's Republic and the Union of Soviet Socialist Republics, of commercial-economic contacts and scientific-technical cooperation.

The task of the Inter-Government Committee is coordination of the activity of the ministries and organs with national authority of the two countries in implementation of the long-range program.

The present long-range program goes into effect on the day it is signed and is valid until 31 December 2000.

8984

CSO: 8125/1356

HUNGARY

REFORM HELD ANTI-INFLATIONARY IN INTENT

Budapest FIGYELO in Hungarian No 15, 11 Apr 85 p 5

[Article by Maria Petschnig]

[Excerpt] The Labyrinth of Implementation

Reform concepts and intentions must always be synchronized with measures implemented in practice. Since 1968 these have been brought into being as a result of greater or lesser compromises. From the start, securities and brakes were built into the measures, and thus the practical result was less than the conceptual, or rather, it has not always proved consistent. Consequently, the awaited significant qualitative changes in the economy's operation did not materialize. Market forces and competition did not become factors significantly influencing economic processes.

Therefore it is not an exaggeration that compared to intentions, all that has come of the restrained (and at times suddenly halted) reform measures is that some changes will take place in the price and distribution system. Thus, the price increases for goods and services did not contribute to either an improvement in their quality or to a significant change in the conditions of production. The reduction of price supports was not followed by the transformation of the production organization, and supply did not conform to the new situation developing as a result of the price measures. Thus contrary to intentions, these did not develop a production surplus which would form the basis of an anti-inflationary practice. And since in turn there came a time for changes in the price structure as part of the reform, the price increase came to be identified in the public's consciousness with the reform.

I hasten to add that though the factors causing inflation also existed and exerted an influence even under the circumstances of the rigid price structure, their influence was exerted in other ways such as shortages in goods and compulsory spending. Just as inflation is not caused by the freezing of prices, so in the same way, it cannot be successfully countered with price freezes. The consumer price increases experienced since 1968 are partly due to the need for channeling off the earlier accumulated inflationary pressure and partly to the necessity of "working off" the recently incurred foreign debt.

And finally to the question of how or whether at all the reform process is related to the increase in the consumer price level, in my opinion, the following

answer may be given. On the one hand, the implementation of changes in the price structure as part of the measures aimed at modernizing the macroeconomic management system created outlets for the external manifestation of the inflationary pressures which had been repressed till then or which arose in the meantime. And on the other hand, in part it is precisely the omitted reform measures, or rather, the occasionally apparent inconsistencies that reinstate inflation on the basis of the old production and market structure.

#### How to Proceed?

Starting in 1985, a similarly decisive and wide-ranging series of measures even affecting the organizational system of macroeconomic management may be expected during the implementation of the macroeconomic management system's further development program. An obvious question is how this "reform package" would be related to inflation in practice.

In the preliminary concept of the 7th 5-year plan, a yearly 5-6% consumer price level increase is expected. Thus, inflation will be moderated accordingly. This conception is primarily based on the view that as a result of the further development of the macroeconomic management system, the market relations forming the natural limits of the price increases will "mature". Thus, in comparison to the previous planning period, even the yearly rate of growth of the producers' prices will be smaller. At the same time it is assumed that the free market price level increases will not exceed that of the base time period.

Inflation of 5-6% is still high, but it is a consequence which is difficult to eliminate of the significant accumulation of foreign debt during the 5th 5-year planning period, and this too is the price of its repayment. It is also necessary that, in addition to the efforts aimed at improving equilibrium, the production mechanism be modernized and that there be significant improvements in the effectiveness of enterprise management. But reality suggests that there are not many opportunities for greatly increasing import during the next 5 years and thus there is little chance for the speedy development of market restrictions which could prevent the rise in either consumer or producer prices. We must also keep in mind that anti-inflationary steps, for example, the reduction of price supports, could at most only be postponed. The increase in the cost of the factors of production, the dissolution of administrative price restrictions and the expansion of the effectiveness of the world market price policy will, in the short term, directly result in price increases. But the current reform/development does not even target the termination of these indirect effects in the near future. The steps in the further development of the operation of the macroeconomic management system are only able to develop enterprise conduct countering internal inflationary tendencies in the long run. Cost and price sensitivity is also characteristic of this type of enterprise conduct.

The field of force of the economic regulators of the market relations must change, which in part, means the expansion of market quantities (in the form of making such goods and services into goods which previously were excluded from the sphere of goods production) and in part, assumes the intensification of market relations (in addition to the assumption that the markets/goods relations will become more intensive, it also assumes that the conditions for the labor market, capital market and money market will be created.) All this is only possible if the role

and also division of labor of the upper level of the macroeconomic management organizations change according to the decrees brought for the further development of the macroeconomic management system.

It is my conviction that only the consistent development of the macroeconomic management system creates any chance for the possible development of the anti-inflationary factors in the operation of the economy in the long run.

9956

CSU: 2500/342

HUNGARY

OFFICIAL ON PLANS FOR INCOME TAXES

Budapest HETIVILAGGAZDASAG in Hungarian 20 Apr 85 p 11

/Interview with Laszlo Antal: "Driving and Tax Collecting in Hungary"/

/Text/ There is citywide talk that people living on wages or salaries will soon pay income taxes in Hungary, too. This, as they say, is also indicated by the fact that since last year the incomes, coming from various sources, of the people in professional careers and of those in the private sector--so far they are the only ones to pay income taxes--have been totalled, so that they can be taxed on the basis of standard rates. We asked Laszlo Antal, section head of the Financial Research Institute for details.

/Question/ When will personal income tax be extended to all of the Hungarian earning population?

/Answer/ For this we still have to wait; neither this year, nor next year, indeed not even in 1987, I believe 1988 the earliest. Thus, beginning with that date and according to present plans, income tax would be paid not only by free-lancing professionals, small industrialists and small merchants but also those who work in the state, collective sector, i.e., those who live fundamentally on wages or salaries. At present we are in the stage of theoretical preparation and, of course, opinions are sharply diverging.

/Question/ Many people think that the general personal income tax will only increase social inequalities. Those with fixed earnings will be taxed, their income can be reported easily. Those, on the other hand, who bungle, have a second job on the side and pocket invisible amounts, those are more difficult to check on...

/Answer/ I would like to go on record right away that taxes on fixed earnings must be compensated for beginning with the introduction of the system. If, say, somebody makes 10,000 forints a month after which he would pay 2,000 forints taxes, then his wages would have to be raised to 12,000 forints, so he does not lose money. In other words, gross



incomes would have to be raised to about such a level that after paying the tax the original income should remain. This would not yet mean anything good or bad to the bunglers, second-jobbers, the owners of the invisible incomes. In fact, I believe that a person customarily having a large side income will hardly dare to keep all of it secret when he reports on his tax form--we envision that this would have to be filled out annually, sometime at the beginning of the year--his main and secondary incomes, from wherever they may come. Of course, if somebody has many secondary incomes from sources that can be checked, these will add up, not only increasing taxable income but also resulting in a higher tax rate. Thus, there will be people for whom the new taxation system will indeed mean an increased burden.

/Question/ If some people do not lose money and others get a worse deal, then why is this form of taxation necessary?

/Answer/ I consider its most important purpose that everybody should contribute to the burdens of the community in proportion with his incomes, that a just and proportionate sharing in taxation should be realized. One of the preconditions for this is that it should be truly possible to have a picture of the income and financial situation of the citizens of the state.

/Question/ But could it not be misused if, say, in a central data bank a detailed report is stored on everybody's financial situation?

/Answer/ I can imagine a situation when this would violate a citizen's rights. At the same time I know numerous countries in which the tax system is working and yet the protection of citizens' rights is not damaged. To me the essential point is that, at present, the regulation of income distribution is parcelled out. Separately does the income from the primary job get taxed, if one can call the contribution to the pension fund a tax, and separately the secondary job. But in my opinion it is not the same thing if a second-job income of, say 3,000 forints supplements the monthly level of earnings to 8-18,000 forints. Accordingly, taxation should be different, too. The extent of contributing to the public burdens can only be based on our attempting to pay attention to all components of the income and then taking into account in some manner also the social situation of the citizens, for example, that the person is saving money to buy an apartment or that he lives in a common household with his sick parent.

/Question/ With extending income taxes the intakes of the national budget will, theoretically, increase. Will therefore the enterprises have to pay less taxes? In how far is the introduction of income tax connected with continuing the economic reform?

/Answer/ The connection is that, among other things, rigid, bureaucratic regulation of earnings can only be done away with in most sectors of the economy if general personal income tax is introduced. The regulation of

earnings has blocked up to now the individual or collective ventures within the enterprises, the true compensation of plus achievements in primary working time. Thus, people in the state sector will be able to earn more money than up to now, and differences in income can be leveled by the general income tax. The introduction of personal income taxes is organically connected with a general reform of the tax system. In long-range projections most budget intakes will not come from the enterprise sphere; the majority of taxes must be regrouped at the end of the production and sales chain in the form of consumer sales taxes or added-value taxes. Thus, in the end, the taxes burdening enterprise stockpiles or property will become superfluous or can be reduced. In no way can personal income tax be introduced without other things changing in the meanwhile and without easing the burdens on the enterprises.

/Question/ What is your opinion about views that instead of a personal income tax system extending to everybody only the rich should pay, that a property tax should be introduced?

/Answer/ I most definitely am against this. Real incomes must be taxed but not the spending, the use of the incomes, because with their society would block its own prospering. The taxation system should precisely stimulate savings, favor important goals like building apartments and not penalize; after all, savings free the state from vast burdens. In my opinion property tax is not a good method for dissipating social tensions. Or should a property tax hit somebody building a house in contrast to somebody who spent his income on travels or booze? Should the citizen who put his money into a secret and so not taxable savings account be free from taxation, and the one building a house should pay? Not only would this be unjust, it would also create distrust.

/Question/ How large would the tax rates be? What expenses will one be able to deduct from the gross income?

/Answer/ Since the principles of taxation are not clear yet, neither has the technique of assessment been established. As to the expenses and incomes deductible from the total gross income, in capitalist countries one can deduct for example expenses connected with performing one's job, thus also expenses for continued professional education or travel to and from one's working place. Taxable income could be reduced and perhaps lower tax rates could be set up depending on the social situation, further in cases of purposeful thrift, like saving for an apartment. About the rates I can only say that, of course, even average incomes would be taxed, not only excessive ones. Care must be taken, however, that tax rates should not grow so fast and progressively as to put a damper on the increase of achievements.

HUNGARY

ENTERPRISES' 1984 PERFORMANCE SUMMARIZED

Budapest HETI VILAGGAZDASAG in Hungarian 20 Apr 85 pp 34-35

[Article by Gyorgyi Kocsis, domestic economic editor: "Enterprise Balance Sheets. Investigation of Funds"]

[Text] The Hungarian enterprises and cooperatives' combined total income last year was higher than a year earlier, and their combined total loss was much lower, but there was an increase in the number of enterprises and cooperatives that closed the year with deficits in their development and profit-sharing funds. In other words, the economy's polarization continued. This is what an assessment recently completed by the Ministry of Finance Main Directorate of Audits shows, but it has not screened out the effects of state grants and subsidies.

Fewer enterprises and cooperatives operated at a loss last year; their combined total loss was smaller, and they had larger incentive funds than in 1983. This is what we read in an assessment that the Ministry of Finance Main Directorate of Audits completed recently, on the basis of summarizing the data contained in the balance-sheet reports of 4,565 enterprises and cooperatives, not including irrigation and drainage associations, savings and loan cooperatives, and small businesses. The "result that serves as the basis of settlement," which is the net balance of profit and loss, was 9.3 percent higher in 1984 than in 1983. (Admittedly, the amount of depreciation also had to be included in offsetting the loss according to 1984 regulations, and this reduced somewhat the net loss.) Last year, 110 agricultural economic units closed the year with a loss (as compared with 164 the year before); in the branches other than agriculture, 55 economic units reported a loss (as compared with 70 in 1983, but 40 in 1982 and only 20 in 1981).

The highest losses were reported by Ganz-Mavag [Ganz and Hungarian State Iron, Steel and Machine Factories], the Lang Machine Factory, and Budapest Zoldert [Vegetable and Fruit Marketing Enterprise]. In most cases the losses were due to declining demand, followed by production cutbacks and a drop in sales. According to the analysis, primarily these were the causes behind the worsening results of the Eger and Matra Region Winery Combine (Eger-Matravideki Borgazdasagi Kombinat), the Baranya Megye Joint Enterprise for Poultry Processing and Marketing (Baranya megyei Baromfifeldolgozo es Forgalmazo Kozos Vallalat), and the Miskolc Dry Cleaning (Patyolat) Enterprise.

Higher costs were the main cause of the loss at the Szechenyi Service Industry Cooperative (Szeccsenyi Szolgaltatoipari Szovetkezet), for example. Investments that have been completed but are not yet yielding a suitable return caused the losses at the Karcag Shoe Industry Cooperative (Karcagi Cipoiipari Szovetkezet) and the Miskolc Dry Cleaning Enterprise, among others. Quality problems were behind the losses at the Budapest Vegetable and Fruit Marketing Enterprise, and the Baranya Megye Joint Enterprise for Poultry Processing and Marketing. There are enterprises where most of these problems occurred simultaneously, e.g., at the Hollohaza Porcelain Factory (Hollohazi Porcelangyar).

In comparison with the year before, more economic units closed the year with a deficit in their development or profit-sharing funds. Last year, 50 of the nonagricultural enterprises and cooperatives did not have profit-sharing funds large enough to pay the tax levied on wage and salary increases, as compared with 36 in 1983. And the development funds at 87 of the nonagricultural units in 1984 (as compared with 75 in 1983) were not large enough for debt servicing. On the whole, the combined total of the deficits in the development funds was somewhat lower than the year before. But a significant contributing factor in this was probably the fact that last year the state bailed out with central resources some of the enterprises that had deficits in their development funds --for example, the Hungarian Wool Mill (Magyar Gyapjufono) and the Pet Nitrogen Works (Peti Nitrogen Muvek)--and ordered the liquidation of some of the other enterprises, e.g., of the Office Machine Industry and Precision Engineering Enterprise (Irodagepipari es Finommechanikai Vallalat) and the Hat Factory (Kalapgyar).

Experts of the Ministry of Finance attribute the deficits in the development funds primarily to shortcomings in the management of inventories and to imprudent borrowing. In their opinion, few of the economic units will be able to cover from their own resources the deficits in their development funds, and the taxes payable from the 1985 incentive funds--the contribution to the municipal or community development fund and budget, the profit tax, the tax on capital, the accumulation tax, and tax on earned income--could further increase the deficit.

In absolute terms, the combined total profit-sharing fund of the enterprises and cooperatives was smaller in 1984 than in 1983. Ganz-Mavag accounts for much of the 428.1 million forints of deficit, but even without it the total deficit is more than double the preceding year's deficit. According to the ministry's report, many of the economic units knowingly chose this situation, expecting that the uniform incentive fund formed as of this year would cover this deficit as well. (The economic units are entitled to draw advances from the uniform incentive fund.) The enterprises concerned readily admitted that higher wage and salary increases than what they could afford were the most common cause of the deficits in their profit-sharing funds. Thirteen of the 50 enterprises with deficits in their profit-sharing funds raised wages and salaries by 5 to 10 percent (the average raise in the national economy was 5.4 percent); and six of the enterprises gave raises of more than 10 percent. Most of the economic units intend to cover their deficits from their own resources and will probably be able to do so.



Development of the Number of Enterprises Reporting Deficiencies (Without Agriculture)

<u>Type of deficiency</u>	<u>Number of enterprises</u>		
	<u>1982</u>	<u>1983</u>	<u>1985</u>
Loss + deficits in profit-sharing, development funds	7	15	13
Loss + deficit in profit-sharing fund	6	12	8
Loss + deficit in development fund	5	8	6
Loss	22	35	28
Of which: recurring loss	7	19	17
Deficits in profit-sharing + development funds	5	3	7
Deficit in profit-sharing fund	19	6	22
Deficit in development fund	13	49	61

Development of the Combined Total Profit, Loss and Fund Deficit of the Enterprises and Cooperatives in 1982-1984\*

	<u>Profit</u>	<u>Loss</u>	<u>Balance</u>	<u>Development fund deficit</u>	<u>Profit-sharing fund deficit</u>
	<u>( billion forints )</u>				<u>(million forints)</u>
1982	194.5	5.5	189.0	8.3	111.0
1983	203.2	7.6	195.6	4.7	46.8
1984	218.2	4.2	214.0	3.8	428.1

\*Comment: A part of the losses at trust enterprises could be offset through transfers within the trusts. (Last year, 1.1 billion forints was transferred in this manner.) The table reflects the situation before the transfers.

Of the economic units in agriculture, 45 had deficits in their funds last year, as compared with 68 in 1983. Of the 155 economic units in agriculture that closed the year with a deficiency--i.e., with a loss or a deficit in their funds--82 were unable to make good from their own resources a combined total deficiency of 1.1 billion forints (as compared with 119 economic units and 1.2 billion forints in 1983).

Last year, the costs of the enterprises and cooperatives again rose at a faster rate than the value of their output. The 7.7-percent rise in their costs (as compared with a 6.5-percent rise in 1983) was due primarily to higher interest costs, social-security contributions, and wage costs. In spite of this, the enterprises were able to increase their incentive funds.

The profitability of the economic units' domestic sales--in other words, the rate of their profit on total income--averaged 5.2 percent last year, a tenth of a percentage point less than in 1983. The profitability of nonruble-denominated export rose; that of ruble-denominated export declined slightly. Within ruble-denominated export, the chemical and machine-industry enterprises were able to export their products the most advantageously; the conditions for exporting the products of metallurgy and light industry were the least favorable. In export to capitalist countries, chemicals and farm products were relatively profitable, but the profitability of exporting light-industry and machine-industry products worsened in comparison with the preceding year. The construction industry and metallurgy were exporting at a loss.



From the above data the Ministry of Finance Main Directorate of Audits concludes that, in accordance with the intentions of economic management, the number of economic units with average results again declined last year; the number with favorable economic results rose; but so did the number of inefficient economic units.

There are again a few economic units this year whose economic situation can be solved only with outside help. This applies primarily to the economic units that reported not only a recurring loss (17 of the 50 nonagricultural economic units reporting a loss) but also a deficit in their profit-sharing or development fund. We may include 13 economic units in this category. Uncovered losses remain at 17 economic units. The fate of some of them has already been decided: eight have ceased through voluntary liquidation, and one is being taken over by a cooperative.

### Definitions

An enterprise's profitability is measured in terms of its profit on total income.

A Hungarian enterprise is operating at a loss when its total income does not cover its total expenditure. A proportion of the grants and subsidies also counts as income. The expenditure is the total of the depreciation, material costs, wages, the tax on wages, other costs, and payments to the state budget. In the case of a loss, the enterprise or cooperative must use first of all its depreciation to cover the loss. Next, it must tap its reserves. In this stage a cooperative can apply for aid from the Mutual Aid Fund. Thereafter all economic units must use the other funds that they manage, and then the unspent balance of the preceding year's development fund plus the refund of the general profit tax on this balance. Next in line are the technical development fund, the cooperative's share capital fund, and the members' equity fund in the case of consumer, marketing and purchasing cooperatives.

An enterprise has a deficit in its development fund when the amount available for this purpose is not enough to pay the enterprise's debts. The economic unit must use its reserves to make up the deficit in its development fund. A cooperative can apply for aid from the Mutual Aid Fund or the Mutual Development Fund. As a last resort, the economic unit can request the Hungarian National Bank to reschedule its credits.

A deficit in the profit-sharing fund usually arises when the tax that the economic unit would have to pay on wage and salary increases already exceeds the profit after taxes. If the economic unit does not have sufficient resources to allot to the profit-sharing fund and to pay the progressive profit tax on it, at present it can turn only to the Hungarian National Bank. A cooperative can obtain a grant also from the Mutual Aid Fund.

As of 1985, a uniform incentive fund replaces the development fund and the profit-sharing fund. It is formed from profit after taxes, and from depreciation and so-called other resources. From its uniform incentive fund the economic unit must cover raises, development-related payments, and the taxes on them.

A reorganization of finances occurs when the loss or fund deficit cannot be resolved by any of the methods outlined above. A reorganization committee is formed, and an interdepartmental commission consisting of the representatives of several central agencies supervises its activity. The interdepartmental commission reviews the work plan that the reorganization committee prepares, and it determines what steps the enterprise must adopt to eliminate the loss. The interdepartmental commission determines how much state aid is necessary to bail out the enterprise, and how this should be done. When a bail-out requires substantial state resources, usually other central agencies also are consulted. The reorganization committee may also propose the unprofitable enterprise's liquidation. The final decision is made by the minister's conference at the ministry concerned or, in exceptional cases, by the State Planning Commission.

1014

CSO: 2500/360

HUNGARY

ASSOCIATION OF STATE FARMS ESTABLISHED

Budapest NEPSZABADSAG in Hungarian 25 Apr 85 p 4

/Article: "Independent Enterprises, Joint Representation"/

/Text/ Wednesday morning the managers of the state farms had a conference at the headquarters of the KISZ Central Committee and established the Nationwide Association of State Farms to replace the Nationwide Center of State Farms which will cease to exist on 30 June.

As part of the modernization of economic management, the new enterprise management forms are introduced also in the state farms. (The members of the enterprise councils, the participants of the delegate assemblies and the leadership bodies have been elected up to now in 99 farms.) Through the work of the self-governing bodies the independence of the farms continues growing, and this fact presupposes a modernization also of higher management. For this reason doing away with the NCSF has already been decided upon at an earlier date. On the other hand, at the conference of managers held last November many people argued that the cooperation between the farms, the collaboration between material and intellectual forces will also be necessary in the future.

To work out the form of this collaboration a preparatory committee was set up whose members inquired in virtually every state farm about ideas touching upon the future of the collaboration. In the name of the preparatory committee on yesterday's managerial conference Andras Klenczner, the general manager of the NCSF gave a report. First of all he evaluated last year's work. Last year the state farms increased their production by 7.7 percent and their profits by 15.4 percent. In 1984 the share of a worker in the profits was 40,000 forints.

After this Andras Klenczner spoke about the forms and methods of cooperation, and then the managerial conference unanimously accepted his proposals. According to these the inheritance of the NCSF will be taken over beginning 1 July by the nationwide association managed by a council of directors. Task of the association will be, among other things, to have an overview of the individual partial areas of the economy, furnishing information for the preparation of decisions,

fulfilling obligations, organizing services, exchanges of experience and exhibitions, and representing the interests of the farms. These tasks will be carried out by the association's apparatus of experts, and the expenses of maintenance will be carried by the farms. More effective work is made possible through the fact that the association will also possess common capital. The member farms will contribute three million forints for this purpose within three--those in a more difficult situation five--years.

Also yesterday it was decided that, similarly to the mutual support fund in the collective farms, the enterprise cooperational fund should be established. The sum of this can be expected this year to be 735 million forints. From this the farms which are transitionally in a difficult situation will receive help with their financial problems, above all in the form of loans. Interest for these mostly short-range credits will be lower than of the credits received from the Hungarian National Bank.

In the work of the conference also Imre Kovacs, deputy head of the section for economic policy of the Central Committee of the Hungarian Socialist Workers' Party and Jeno Vancsa, minister of agriculture and food administration participated. As Jeno Vancsa said, in the future one of the important elements of progress will be the widening of enterprise autonomy and, in connection with it, of individual responsibility.

The managerial conference finally elected the members and leaders of the council of directors. They elected for president of the council Robert Burgert, the general manager of the Babolna Agricultural Combine and for general manager of the nationwide association Andras Klenczner.

12772  
CSO: 2500/358

HUNGARY

REPORT ON ANNUAL MEETING OF NATIONAL BANK

AU071505 Budapest MAGYAR HIRLAP in Hungarian 2 May 85 p 7

[Text] MTI--The Hungarian National Bank held its 1985 ordinary annual meeting on Tuesday [30 April]. Attila Madarsí, state secretary of the Ministry of Finance, representatives of the state as a shareholders, and members of the directorate and management, as well as the auditors were present. The balance of 31 December 1984, the statements on 1984 production results and the report on last year's business activities were read by Matyas Timer, president of the bank.

The largest increase in assets--by 38.1 billion forints in 1 year, namely to 116.6 billion forints, was registered in currency and foreign exchange reserves, and in sight [latraszolo] debts.

At the end of 1984 medium- and long-term investments amounted to 400 billion forints, 10.4 billion forints more than a year before. In this sector capital paid out to financial institutions increased by 18.3 billion forints to 188.9 billion forints. The amount of credits to firms within this category decreased by 1.2 billion forints and at the end of the year amounted to 185.4 billion forints. The credits of investments, in accordance with credit policy measures, are aimed at improving the balance of the national economy, reorganizing production structures, boosting readiness to export, fulfilling international obligations, the more sensible consumption of energy, the utilization of waste materials and secondary raw materials, the improvement of supplies for the population, the economic use of material, and the promotion of the program for technological modernization. In this range of aims the bank has given investment credits to those properly prepared investments that ensure the repayment of credits on schedule. The medium- and long-term budget liabilities--because of the increased repayment of the debts--dropped by 6.7 billion to 25.7 billion forints.

The final total of short-term outlaid credits was 183.1 billion forints, which exceeded the previous year's figure by 28 billion forints. The majority of these outlaid credits consist of credits granted to companies, the balance total of these on 31 December [1984] was 137.8 billion forints, the increment of which was 17.4 billion forints. Within the framework of short-term credits the bank endeavoured, by heeding the balance requirements, to ensure the money demand of production, turnover, and stockpiling, to finance



stocks required for seasonal reasons, and to make use of the cyclical economic advantages of import and export.

The bank stimulated the enterprises with various credit terms to cut surplus stocks, to accelerate the repayment of credits, to cut back uneconomic production, and to strengthen the discipline of contracts. But the bank did not grant credits for financing durable working assets or surplus stockpiling, or for producing for lengthy storage either because of quality reasons or other sales difficulties, or for production causing an unjustifiable demand for hard currency.

It can be seen from the balance sheet that in 1984 the bank, apart from adjusting to the rates of exchange on the market, has on two occasions (7 February by 3 percent and then 26 June by 5 percent) devalued the forint against those capitalist currencies that are most important for the currency structure of our exports.

Among the liabilities, at 6 billion forints, the amount of share capital was raised by the previous meeting by 4 billion forints, so at 31 December 1984 it totalled 10 billion forints. As owner of the shares, the state paid in the amount of the increase of the share capital. On 31 December 1984 the amount of reserves was 6.9 billion forints which includes a 2.4 billion forint annual increment. One billion of this is a result of the fact that last year's meeting raised the reserve stock by this amount. The rest of the growth comes from budget subsidies for the foundation of sister banks and from the increase of the bank's fixed assets.

The final total of deposits and other obligations was 549.4 billion forints, 28.6 billion forints more than a year before. The deposits of monetary institutions exceeded those of the year before by 25 billion forints, and the budget's accounts showed a debit increase of 18.3 billion forints. At the same time the deposit total of companies decreased by 16.2 billion forints. The target-oriented deposits of foreign trade decreased sharply, because the obligation to outlay the import cover was lifted on part of the companies. The stock of deposits for investment and development purposes has also somewhat decreased. The clearing deposits increased.

On 31 December 1984 the total value of notes and coins in circulation was 108.8 billion forints, 10.9 billion forints or 11 percent more than a year before. The cash requirement of turnover was increased by the growth in volume in goods turnover and services, the rise of prices, and the growing need for money by the various small and private enterprises.

According to the statement on production results the bank's profit in 1984 amounted to 15.1 billion forints, 2.1 billion more than a year before, because while incomes grew as a result of the surplus profit on the greater domestic credit stock by 7.8 billion forints, expenses only increased by 5.7 billion forints.

The exchange control laid emphasis also in 1984 on the further strengthening of the foreign trade balance and international solvency, and on the aim to achieve a surplus in the current balance of payment. This--in very difficult

market conditions--made it necessary to increase the positive balance in foreign trade. Demand for a considerable part of our traditional export goods was slack, the drop in the prices of dollar-goods was bigger in exports than in imports. The deterioration of rates of exchange and the loss of prices were greater than expected. At the same time our country's reputation on the international credit market, has improved as a result of the successful efforts to improve the balance situation in foreign trade; our credit worthiness reached this point before the debt crises in the second half of the year and this enabled a borrowing higher than planned.

This enabled a more favorable set up of maturity structure, and hard currency reserves to be filled to a suitable level. The efforts to maintain a balance finally brought success in 1984. The foreign trade surplus, although it did not reach the planned level, exceeded that in 1983, apart from aspects of goods turnover, especially with the surplus resulting from tourism, and added to a stronger decrease of the net amount of convertible debts than a year before.

The auditors stated in their report--based on their examination--that the balance and the statement on the production results correspond to the figures of the bank's accounts, and their preparation was correct and in accordance with the law. There followed the suggestion of the bank's president that the meeting allot 1 billion forints of the 15.1 billion forints profit of 1984 to increase reserve capital, and so the bank would remit 14.1 billion forints to the state's budget. Further he suggested that--on the basis of further calculations--an increase in the bank's share capital and reserve capital to a higher degree at a later date be prepared which is to be discussed beforehand with the minister of finance.

CSO: 2500/388

YUGOSLAVIA

CONTINUING IMPACT OF HIGH INFLATION ANALYZED

Belgrade NEDELJNE INFORMATIVE NOVINE in Serbo-Croatian No 1789, Apr 85 pp 17-19

[Article by Branko Colanovic, NIN columnist on economic affairs: "The Parabola of Hope"]

[Text] There was a time when we were told by the official spokesman that in 1985 the rate of inflation would first rise and then gradually drop in the second half of the year. The parabola of hope. But he did not say how this year as a whole would end compared to the previous year.

Judging by the first quarter, it does not look good. A comparison of March 1985 with the same month of 1984 shows a 73.4 percent rise in retail prices and a 76.9 percent rise in prices of producers in industry. Last year the increases were considerably smaller. A comparison of March 1984 to March 1983 showed a 56.4 percent rise in retail prices and a 55.3 percent rise in industrial producer prices. If the "lap time," as they say in track, is indicative of the outcome, we can recall that inflation in December 1984 was approximately the same as that in March. That need not be the case now, but it could be worse.

It is hard to see how the factors current economic policy is counting on can be effective. The approach actually being taken to combat inflation is essentially mistaken. The Resolution for 1985 takes pains to define the task numerically, but it envisages "creation of the economic conditions for reduction of inflation." How?

Through further application of real economic categories, by strengthening the operation of market criteria and by the undertaking of economic policy measures the conditions will be created for suppressing inflationary pressure, above all through financial consolidation and further reduction of fictitious income, by increasing the scale of production and improving its economy and by guaranteeing more harmonious relations in the pattern of production and consumption and of supply and demand. Measures will be taken towards better organization and towards overcoming problems in the functioning of the unified Yugoslav market. Conditions will be created for prices to form on the market and for the mechanisms of social price control to be constructed and applied

and for the disproportion in relative price relations to be gradually eliminated. Gradual reduction of the rate of inflation will be assured.

That is all, but it provides nothing. On the contrary, the way things are developing, we might sink either to indexing personal incomes and pensions or to yet another price freeze.

#### Produce, Produce More

Unless there is a rapid growth in the social product, the Gordian knot contained in the conclusions of the 16th Meeting of the LCY Central Committee cannot be cut.

Over the period 1982-1984 the social product grew at an average annual rate of 0.5 percent, a total of 1.5 percent over the three years. Over that same time the population of Yugoslavia increased faster, totaling about 2.5 percent. There are more and more Yugoslavs with an ever smaller per capita social product. How, then, are they to perform the priority tasks of the 16th Meeting?

Let us briefly analyze those conclusions and begin with the last one - faster creation of new jobs.

Over the last three years 110,000 persons have been added to the labor force, a total of 330,000 new jobs, while investments in fixed capital of the economy totaled 936 billion dinars (in 1980 prices, which are also those used in the computations below). Faster creation of new jobs in the terms of the Resolution was supposed to mean 155,000 a year. At the same rate of investment per job 434 billion would have to be invested in the fixed capital of the economy in 1985. The first problem: that would be a real growth of investment of about 53 percent over 1984. The second problem is related to the efficiency of investments. Over the same period 1982-1984 we had an absurd 37 dinars of investments in the fixed capital of the economy for every dinar of the social product's growth (capital coefficient). If that "efficiency" of investments persists, the real social product in 1985 would in this case increase about 11 billion dinars, or only 0.6 percent, over 1984, which is less than the growth of the population will be. The Resolution for 1985 envisages that the social product will grow at a rate of 3 percent, which at the same investment per job would mean that to add 155,000 persons to the labor force we would have to achieve an investment efficiency fourfold better than up to now, that is, the capital coefficient would have to be about 9. This is obviously impossible without an exceptionally concentrated and selective economic policy and development policy, but the time has already run out for getting it in 1985.

#### The Personal Income is Paying Everything

All that is left is to count on a drastically smaller investment per job as when all the new jobs are created in small business or the crafts and trades. However, reality appears differently. When the growth of the social product is insufficient, faster creation of new jobs would signify, as it has up to

now, a new blow to the productivity of labor and thereby a new thrust for inflation as well as a drop in real personal incomes and pensions.

However, what if the imperative for the new addition to the labor force should be greater than 155,000 persons on grounds of social welfare policy? Even with the 3 percent growth of the social product envisaged by the Resolution, leaving aside altogether its actual trend, which has been altogether unsatisfactory, the entire idea of faster creation of new jobs, of bringing down inflation, of taking the burden off the economy, and so on, would come tumbling down like a house of cards.

Let us take the second task, augmenting exports. The Resolution for 1985 envisages that this would be 12 percent, while imports would increase by 7 percent. That, unfortunately, is not being achieved for the present, since the first quarter ended with a 6 percent drop in exports and a growth of imports of the same size. But let us assume that in the end the Resolution is after all accomplished with respect to the anticipated growth of imports and exports of goods and services. If those goals are placed in relation to the social product, it turns out that we would have to give up about 352 billion dinars from the social product for exports and that we would have to return about 321 billion dinars to the social product through imports. That means that if exports are to exceed imports, the social product would have to grow by about 31 billion dinars, or 2 percent, over 1984.

Again when we look at the task of achieving relief for the economy and increasing its share in the distribution of income and also at strengthening its ability to form capital, we confront similar contradictions. What represents a burden on the economy is at the same time the backing for government and social-service expenditure, for the immense "social overhead," with its very low productivity, for social welfare benefits, pensions, and so on. Reducing the contributions and taxes used to finance all these purposes would signify a further pauperization or steep slowing down of the growth of personal incomes in education, health care, financial organizations, jurisprudence, science, culture, housing and municipal services and utilities, sociopolitical communities, etcetera, in which about 1.5 million people are employed. But that collides with the task of halting the drop in the standard of living. The same applies if real pensions are dropped below the subsistence level. And the worst outcome would be to undertake a sudden large-scale layoff throughout the entire complex of activities outside the economy.

Here again the solution can lie only in a faster growth of the social product, in which outlays for the complex of noneconomic activities must first grow more slowly than the social product, and then, gradually and deliberately, reduction of this entire superstructure to bring it within optimum limits in absolute terms would be undertaken.

The task of halting the drop in the standard of living would have to mean increasing the share of personal consumption in the real social product, which remains unchanged, at least to keep up with the growth of the population.

The social product has stayed at practically the same level recently. The



share of personal consumption in that stagnant social product has been dropping appreciably, since in 1981 it was 51.5 percent and in 1984 about 49.9 percent. Per capita personal consumption dropped from 36,000 to 34,600 dinars, or about 4 percent.

The lost personal consumption has gone primarily to the advantage of exports, and then to the unnaturally large amount of the social product tied up in the ever larger investments in the working capital of the economy.

#### Widespread Disorder

If we forgive the outflow of the social product through exports (inadequate anyway), since the excessively large external debt, while the social product is stagnant, must be repaid at the expense of the standard of living, we have to look very severely at the trend of working capital. Here is the entire series for the last 6 years (in billions of dinars):

	Social Product	Investment in Working Capital	Share, in Percentage
1979	1519	122	8.0
1980	1553	142	9.2
1981	1573	191	12.1
1982	1586	189	11.9
1983	1565	199	12.7
1984	1598	206	12.9

The picture could hardly be less favorable. The social product has grown 5.2 percent since 1979, but investments in working capital nearly 69 percent. In 1984 it took 6 percent more investments in working capital to achieve a single unit of the social product than it did in 1979.

There is only one explanation for this: The grave state of disruption of the domestic market, the immense shortcomings in the system of foreign economic relations and the very bad state of transportation. As a consequence the economy has been forced to invest more and more in inventories, to finance suppliers, in work in process, in storage of finished products, in goods en route, in the credit financing of customers and so on. Halting the drop in the standard of living, then, comes into conflict with the widespread disorder which prevails in the domain of domestic supply and cooperation in the economy, in imports and exports, as well as in the transportation sector.

Two more possibilities, from the theoretical standpoint, would be available to halt the drop in the standard of living. The first would be a further reduction of the share of economic investments and working capital, but that could not be squared with the task of creating new jobs at a faster rate.

Another possibility might be seen in reduction of noneconomic investments. To be sure, they have been dropping appreciably for quite some time now, since they have had a negative growth rate in all of the last five years. Nevertheless, the potential does exist for channeling the social product into halting

the drop in the standard of living.

Although it lies outside this discussion, it still might be pointed out incidentally that the problem is in general not a large one when we look at personal consumption as a whole, since in per capita terms it has dropped only 4 percent in 3 years. The severity of the problem in terms of social welfare policy is related to the immense drop in the real incomes of employed persons and pensioners. In fact within the framework of personal consumption there has been an extremely serious stratification taking place to the disadvantage of some categories and to the advantage of other categories of the population. But that is a topic to itself.

#### Inflation: Illness Without Treatment

If we attempt in a synthetic way, relative to the conditions and circumstances that prevail in 1985, to examine the order of magnitude for that growth rate of the social product which might correspond to the priority tasks as defined by the 16th Meeting of the LCY Central Committee, we conclude that the necessary increase is approximately as follows:

Growth of the population	1%
Surplus of exports over imports	2%
Faster creation of new jobs (155,000)	1.5%
Halting the drop in the standard of living	0.5%

The result is a total of approximately 5 percent. In the case of faster creation of new jobs it was assumed that investment efficiency would double, i.e., that the capital coefficient would drop to 18. In objective terms that would still be very bad, but not so absurd as up to now. In the case of halting the drop in the standard of living it was assumed that for the same reasons as in past years the growth of investments in the working capital of the economy would inevitably continue and that noneconomic investments could not be drastically reduced except through another administrative ban.

The 5 percent growth rate of the social product we get served the sole purpose of showing the necessary change in the approach of economic policy in solving the most important and complicated tasks of the present time. It naturally cannot be the actual rate for 1985, since the conditions for it were not created in advance. This rate should be taken as a postulate for reference purposes if we have to perform the tasks of the 16th Meeting, and we do.

As for inflation, there will not be any rapid or even instantaneous results. Our illness is a persistent one and it must be treated patiently.

It is essential that economic policy divorce itself from its deep-seated restrictiveness and move on to a new line of attack and impose itself with all its penetrative effects.

Why is the Antiinflation Program, which was adopted three years ago, not being carried out? Because the Long-Range Economic Stabilization Program is not being carried out of which it is an integral part. There was no antiinflation program drawn up in isolation.

The essential goal of the Antiinflation Program was to bring down the rate of inflation gradually, but rather quickly. I will be uttering a stupid tautology when I say that the Antiinflation Program is not being carried out because inflation is so high. When numerous forces are working in the direction of excessively high inflation, the modest content of the Antiinflation Program, which was a separate document comprising a part of the Long-Range Economic Stabilization Program, had to be trampled underfoot.

There is a direction we ought to move in, and that is the Long-Range Program. At present we are on the wrong track. There were too many influential switchmen for us to be on the right track.

As theory and history show, inflation has its losers, but also its gainers. In our country the latter should be sought out where thanks to the distorted effect of a number of measures of the Antiinflation Program the deposits of unjustified excess income are becoming thicker and thicker.

The railroad car of the Yugoslav economy is on the wrong track, and it is all ablaze with the flame of inflation. The reactions vary. Some people feel that it is the end of the working day and that putting out the fire should be left to the next shift. Others, fanatics, believe that the car should first be returned to the right track and only then should the effort begin to put out the fire of inflation. Still others, helpless travelers, are pulling out everything they can, using the distorted effects of interest rates, the fall of the dinar and other events which the Long-Range Program did not deal with at all.

#### Being Able or Having the Will

But if the postulate is to achieve a stronger growth of the social product, the main question that arises is - how?

The errors of the past must not be repeated. But they did not lie so much in the borrowing abroad as in the use of foreign capital for numerous unsuccessful economic investments, for noneconomic investments which were objectively unnecessary under present conditions, and for an undeservedly high personal consumption.

The question of how to increase the social product more significantly is truly a challenging one. Let us try to deal with it if we know how.

YUGOSLAVIA

ECONOMIST DISCUSSES CHECKING INFLATION WITH FOREIGN CREDITS

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 22 Apr 85 pp 18-20

[Article by Dr Davor Savin: "How To Stabilize Inflation"]

[Text] If instead of repaying foreign credits Yugoslavia could continue to take them, as it did over the past decade, inflation--all other circumstances remaining unchanged--would be lower. The high growth of prices is the way in which macroeconomic imbalances are righted in the present structure of our economy and with the arrangements that exist in the economic system. In earlier years imbalance between aggregate supply and demand was corrected with the help of foreign credit resources and through prices. Now--predominantly through prices.

Over a period of several years up to 1982 total consumption in the country amounted to between 106 percent and 108 percent of the value of the social product. The difference was covered by the deficit in the balance of payments, that is, by borrowing abroad. The figures on the use of foreign capital are well known. In 1975 the country owed about \$6.5 billion. Two years later \$9.5 billion, and after just another 2 years: \$15 billion. Over the 12 months that followed another \$4 billion were added to those obligations, and since that time the total debt, not counting interest, has fluctuated between \$19 and \$20 billion.

The 1977 Law on Foreign Exchange Transactions and Credit Relations With Foreign Countries made organizations of associated labor the principal holders of rights and obligations in credit transactions with foreign countries, which, together with the introduction of the payments-balance positions of the republics and provinces, speeded up the borrowing. Unified management of the country's debt was made impossible, and the economic management of the balance of payments, that is, of the deficit, was left to the individual republics and provinces. The growth of the country's total debt coincided with the rise of interest rates on the international financial market, but also with the approach of due dates for repayment of the first obligations, especially short-term obligations. The year 1979 was the last year in which payments come due on foreign credits were smaller than the growth of the social product. Since 1980 its growth has been smaller than the amount of debt payments.

## The Impact of the Debt

This year and in the other years of this decade Yugoslavia will be annually repaying an average of about \$3 billion in principal and \$1 billion in interest. A portion of those obligations will have to be met by additional commitment of foreign capital (through refinancing and the like), and a portion from our own sources, from the surplus in the balance of payments. A constant surplus is becoming a condition if our economy is to function without falling behind in meeting its obligations. That in turn makes it indispensable that exports grow constantly at high rates. Production supplies are now dominant in the growth of exports, while exports of goods intended for final consumption are lagging behind considerably. As a consequence the share of domestic labor in total exports is dropping, while the sale of physical material is increasing. Exporting cannot be done over the long run if the present pattern of the offering being shipped to the foreign market is maintained. When that comes to an end--and it seems that this is actually happening now with Yugoslav exports--a further growth of exports is feasible only by shifting factors of production from present activities into activities producing for export, that is, by channeling new investments into capital construction intended for the production of exportable goods.

Regular settlement of foreign obligations and furnishing the foreign exchange to pay for imports (every reduction of imports harms industrial output directly, since its dynamic behavior is very sensitive to the inflow of imported raw materials, energy and spare parts) do not require a further reduction of consumption. That reduction has already been accomplished and is most noticeable precisely in the field of investments in fixed capital, which last year in real terms were at the level of capital investments in 1979. There is probably not much room left here without falling into social welfare and other difficulties which would no longer be controllable. What will have to be done--and that very quickly--is to redirect a portion of the existing factors of production, including a portion of total employment, to work for the foreign market, for exports, instead of for the domestic market.

This need becomes more obvious if we assume for a moment that the inflow of foreign capital is interrupted. Then Yugoslavia would have to take over the entire burden of paying back principal and interest, that is, it would have to furnish the resources to meet those needs through its own inflow of foreign exchange. To what extent could this be done by withdrawing goods from the domestic market and committing them to export, i.e., by displacing domestic consumption? Very little. Production intended for consumers within the country can be committed to export only if foreign demand is identical to domestic demand in that segment of the structure. As a rule this is not the case, so that domestic factories would have to reorient toward production of what the foreign market accepts and is looking for.

An interesting question arises in this connection. Does the inflow of foreign capital (more precisely, the refinancing and postponement of the payment of a portion of the principal) make it possible for consumption to be greater than would otherwise be the case? In other words, do the additional credits augment the available income of Yugoslavs? Not by a single dinar. What then



credits do make possible is maintaining the factors of production and manpower in their present alignment and in the production of what they have produced up to now and in the way that has been done. But changing that alignment is precisely what it is all about. Those changes are supposed to comprise the essence of one aspect of the process usually referred to as structural changes of the economy. Its other side is shutting down inefficient and unprofitable organizations of associated labor, that is, enterprises which do not have the conditions for regular business operation under the altered circumstances of economic activity and which are surviving thanks to the predominantly high prices on a closed and monopolized market. However, changing the economic structure has been made difficult, and in some communities even altogether impossible on one or on both sides of the process which constitutes its essence.

#### A "Model of the Present Situation"

Our economy is facing not only regionalization of the market and the closing off the republic and provincial economies into "their own respective" borders, but also decentralization of decisionmaking, and that at all levels. At the same time feedback mechanisms have not been built up that would unify individual economic interests and direct them into a single channel.

The unity of the economy is being created exclusively by the unity of the market, i.e., by the same equilibrium price over the entire market, which also presupposes uniform criteria in the conduct of economic activity. The price has to be a parameter for economic decisionmaking on a product's production, distribution and use. The equilibrium price of equal products, equal and equilibrium personal income per unit of work applied, equilibrium price of capital and financial resources at the level of the entire economy, and also an equal and equilibrium exchange rate of the dinar (and that means "real")--these aggregates transform the multitude of separate independent economic units into a unified economic whole.

The closing off of the economy into republic and provincial boundaries and building up "one's own" production, from the heavy to the manufacturing industries, including the fuel and power industry and transportation, would form typical oligopolistic structures on the market, would rupture the ties between production and distribution organizations in various regions and would loosen their technological links. The interests of local communities would encourage the monopolistic method of setting prices in which the criteria would not be the average producer's costs, but the marginal costs of the least successful organization, it is the higher prices which have made it possible for them to bring their income to the necessary average and thereby survive on the economic scene.

It was imagined that the feedback that would lead to harmonization of economic flows would be provided through the planning system. It was conceived as a simultaneous, two-way and ongoing process at several levels of decisionmaking. The numerous plans of individual enterprises and sociopolitical communities were to be reconciled through horizontal and vertical linkage based on social compacts and self-management accords. Those agreements were to set forth the quality, the quantity of goods and services to be produced and exchanged, as

well as prices, subsidies, distribution of income, contributions to government and social service consumption, the pooling and the volume of investment resources, the principles governing the growth of the money supply, the policy for creation of new jobs, and so on. This idealized planning never came to life, so that it was not possible to replace the "conventional" instruments for management of demand and channeling of supply. However, the defects of the economic system which have been mentioned largely weakened the effectiveness of these instruments, so that frequent interventions of economic policy were necessary, as a rule adjusted to the needs of the moment and without reliance on a long-range development strategy.

At the same time it is not possible without obstacles to guide an economy with unified economic policy measures since except in a few cases the arrangements in the economic system have not been adapted either to the making, nor execution, nor followup on execution of decisions which pertained to the entire territory of the country. Fiscal policy and the policy in the domain of income, for example, are essentially macroeconomic in nature. If their measures are to be effective and if they are to reach the problem they are aimed at, they cannot be made at differing levels and for each region separately.

The credit-and-monetary system also does not function as a whole. Because the country has not had a unified monetary territory within which resources for payment would circulate without restriction, the total quantity of money has always been greater than the need required. The reference here is to the ratio between each unit of value of production and the distribution resources required to carry out the sale. "Illiquidity" is a phenomenon with a different source and of a different nature than suggested by the semantic meaning of the word usually used to denote it. In our country an economy is considered illiquid if it does not possess the volume of capital necessary to fund intended and planned investments in fixed and working capital, which has nothing whatsoever to do with the problem of illiquidity which represents a short-term shortage of money, but not of income. The surplus of the money supply that exists in one part of the country is not sent to another where a shortage has been ascertained, but is retained for "one's own purposes," and a new issue of credit makes up the remainder of resources in distribution in the regions where that need exists. If unified economic space existed, that is, a unified market, the rate of circulation of the money supply would be greater than it is now. With the same quantity of means of payment, a higher level of current liquidity of the economy would be achieved, and there would be less need to issue new money.

The criterion with which monetary policy determines the growth of the money supply in a particular period is the growth of the nominal social product. Nine note-issuing institutions will create an indefinitely large quantity of money necessary to serve the social product. In that context it is a matter of indifference for our credit policy whether prices rise 5 percent or 75 percent per annum. Its "stabilizing" role does not go beyond furnishing the volume of the newly created quantity of money which will correspond to the rise of prices plus the real increase of the social product (if any). In that kind of model monetary equilibrium is established at any growth rate of inflation, and in this the coefficient of the turnover of the money supply is as a rule

not taken into account. In any case over the short run it is a constant value determined by the regional distribution of money flows, the distribution of money to the advantage of noneconomic entities and the slower technical circulation of means of payment among economic entities and between them and the commercial banks.

Keeping up with the rise of prices, monetary policy, which arises out of the disintegrated credit and monetary system, speeds up inflation for its own part by making it possible to sell goods and services on a market on which the constant surplus of demand has guaranteed sales regardless of the price level. At the same time, this monetary automatism has contributed strongly to maintenance of the existing distribution of the factors of production, i.e., the given production structure, renewing the existing level (however low and unsatisfactory it may have been), the existing productivity of labor and economic efficiency, as well as the existing losses, the moderate adequacy of personnel and other characteristics of an economy which, should the present structure be retained, can function only if prices rise constantly.

One of the most noticeable features of economic policy has been that a "model of the status quo" has been the framework for its operation. That is, its point of departure is the present economic structure and relations as they are, especially in the domain of demand, rather than an offensive endeavor to alter that structure. All proportions are being retained, and the existing positions on the market are taken as given, as are the existing level of business efficiency, the relations formed between production and distribution, the existing fragmentariness of the market, etc. Changes in these domains are not yet foreseen or at least have not been carried to a level that would become operational in any foreseeable time. Precisely for that reason macroeconomic equilibrium is not being reestablished in the real domain of economic activity, that is, by a growth of output, by starting new enterprises and by closing down inefficient ones, by changes in the distribution of income, by exporting concentrated knowledge and products of the finishing phase instead of materials for further phases of production, and so on, but equilibrium comes about primarily through changes in the domain of money, by means of constant price rises.

#### Real Prices of Factors

Gradually moving towards real prices of the factors of production helps to alter the economic structure, but this is a very slow process whose pace has also been hampered by areas of incompleteness in the economic system. It is interesting that the frequent criticism of the policy of the real rate of interest is related above all to the high rate of inflation, in that the cost of interest becomes part of the causal mechanism of price rises. If the inflation in our country were 5 percent instead of 75 percent, the psychological perception and reflection of the interest rate in the eye of the critics of that instrument would be different, and the remarks addressed to it would not be so harsh. It seems that people are disturbed by the level of the nominal rate of interest, not so much by the fact that this enters into the zone of real positive growth. After all, it is a matter of complete indifference whether the real interest rate coincides with a rise of prices of 5 percent or

75 percent. In both cases it will create the same consequences since it is a real magnitude. The difference will lie only in the adverse effect on overall economic developments brought on by 75-percent inflation as compared to an inflation that is one-fifteenth as high. In addition, the expectation of a further rise of prices, which at a high rate of inflation is always more pronounced, will also create more adverse effects. But that is a problem of inflation as such, and it has nothing whatsoever to do with the question of the real rate of interest. Which accounts for the argument which is sometimes heard, to the effect that the positive real interest rate should be arrived at by a prior reduction of price rises, makes no sense from the standpoint of the very goal which people would like to attain with this instrument.

In connection with this issue it is of interest to mention that the pressure of costs based on interest will be smaller in the first part than in the second part of this year and smaller in 1985 than in 1986. The reason for this is that the new "high" interest rates apply only to new credits, while on loans taken previously the earlier and lower rate of interest is computed. Accordingly, 60 percent is the maximum interest rate, while the average rate is appreciably lower and ranges between 18 and 20 percent. As the earlier credits are gradually repaid and new ones taken, the average rate of interest will be rising from month to month and from year to year, and thereby unit business operating costs will be going up accordingly. Only if the producer price rises with the rise in the average price of money offered *pari passu*, and that precisely in the proportion to which the "expensive" credits share in total production, can an economic organization slow down the outflow of income on the basis of interest. Another way would be a proportional growth of their own time deposits or absorbing the additional costs by raising labor productivity.

When do the maximum and average interest rates become equal? It can be assumed that this will occur over the next 18 months, and in the case of long-term loans approximately by the end of this decade. In the meantime economic entities, depending on the pattern of credit and its division into "old" and "new," will be paying an average rate of interest below the maximum rate. Of course, this is assuming that the distribution between long-term and short-term credits remains as it is now. Should there be a change in this ratio, as a result, say, of a faster growth of short-term lendings as compared to long-term, the approach to the maximum average interest rate will occur earlier than would otherwise have been the case. Consequently, total appropriations for interest for every unit of loans used will also be greater.

This is the point at which inflation and the question of curbing it enter into the discussion. With respect to the features it possesses and the destructive consequences it brings, the present rise of prices is not only an unpleasant phase in the business cycle of the Yugoslav economy, but one of the central economic events of the decade, whose influence will even affect developments over the next decade. How is the rise of prices to be slowed down? The proper answer, though it goes to the essence of every anti-inflationary action--is to increase production. And that must be productive production which can respond to the demands of international competition. The economy of Yugoslavia has less need for an anti-inflation program (prices are only a reflex

of overall developments and various forms of imbalance) than for a program to speed up the growth of production. The basic obstacle here is the inelasticity of the economic system and its incompleteness, and the first recommendation to economic policy is to encourage development wherever this can be done not only over the short run, but indeed over the very short run. The priority task of economic policy--prompt repayment of debts and preservation of external liquidity--demands that all other goals of development be brought into a more harmonious relationship with that task. Since achievement of that goal necessitates maintaining the production--exports--imports tie-up in a steady and dynamic climb, economic policy is left very little free room in which to maneuver. If the planned growth of any of the elements of this fateful triangle of the Yugoslav economy fails to materialize, this casts doubt on the entire concept of stabilization. That is why its maneuvering room should be broadened by stimulating the growth of those activities whose dependence upon the external market is low and comparative advantages are pronounced. The reference is to agriculture, tourism, housing construction and small business. Our country possesses all the necessary factors of production and the financial resources for them to grow faster than they have up to now. Economic policy ought to add stimulation of the growth of these activities to the preservation of external liquidity as the next-but-first priority. Among them agriculture is the most important for its stabilization potential, the magnitude of its multiplier effects and the potential it has for both current development and for economic development in coming years. In addition, inflation cannot be reduced to tolerant growth rates unless the food supply is increased first.

7045

CSO: 2800/323



YUGOSLAVIA

DATA ON KOSOVO USE OF INVESTMENT CREDITS

Pristina JEDINSTVO in Serbo-Croatian 17 Jan 85 (DELEGATSKE NOVINE supplement)  
pp 2-3

[Excerpt] Sources of Funds

Trends of investment expenditure took unfavorable turns in 1984. These trends were the result of unsatisfactory utilization of part of the assets of the Federation Fund which had been set aside for associating labor and resources.

Investments in the economy of the Socialist Autonomous Province (SAP) of Kosovo during 1985 will also be mostly financed by credits. The level of the economy's indebtedness to foreign countries and to the Federation Fund will essentially restrict the base available for self-financing of investments. A large proportion of the assets attained through reproduction is made up of assets of amortization as a factor of simple reproduction, and the amount of accumulation realized will not be enough for payment of large annuities.

Obligations of the SAP of Kosovo to foreign countries will amount to 190,200,000 dinars, compared with Federation assets of 3,687,800,000 dinars.

Kosovo's Assets

During the period 1981-1983, assets of organizations of associated labor (OAL) made up 11.3 percent of total investment assets, with somewhat limited possibilities for an increase in 1985.

Assets attained through reproduction (amortization and accumulation) will amount to 27.9 billion dinars in 1985, which will not be enough to pay annuities to foreign countries amounting to 27.1 billion dinars (\$1.00=185 dinars). Using all of the assets gained through reproduction for the purpose of liquidating obligations would endanger the normal functioning of Kosovo's economy. However, in order to overcome problems of payment of annuities, a position established by federal resolution for 1985, as a part of measures and activities, will: "postpone annuities involving credits provided by the Federation Fund for Financing Accelerated Development of Economically Underdeveloped Republics and the SAP of Kosovo which mature in 1985." The effects of these measures will be significant, because they extend annuities amounting to 3,682,800,000 dinars. The federal resolution also established that: "The federation will take on dinar credit obligations of the SAP of Kosovo owed to the International Bank for Reconstruction and Development."

With the implementation of this measure, the SAP of Kosovo will be freed of the obligation of paying 4,921,000,000 dinars (\$26.6 million).

If these measures were not implemented, the economy of the SAP of Kosovo, with only its own assets for investment, would not be in a position to set aside funds for investment, but would have a deficit of 1,966,800,000 dinars.

In implementing these measures, which will have the effect of providing an additional 8,603,800,000 dinars, the economy of the province will be in a position to set aside investment funds amounting to 5,567,000,000 dinars, since credit obligations will now total 18.5 billion dinars instead of 27 billion dinars.

#### Federation Fund

Formation of assets of the Federation Fund intended for the province's economy--for economically underdeveloped regions in general--depends on the dynamics of social product growth of the country's economy in 1985.

If social product (social sector) in the country's economy grows by a nominal rate of 55.2 percent during 1985, the total assets of the Federation Fund will be 166,507,200,000 dinars after setting aside 1.86 percent of social product. The share of these assets allotted to the SAP of Kosovo is 43.5 percent, which would amount to 72,430,500,000 dinars. In order to mitigate the problem of working capital, it will be necessary to set aside 10 percent of these assets for this purpose. It is estimated that assets of the Federation Fund for financing investments in fixed assets of the economy of the SAP of Kosovo in 1985 will amount to 72,238,000,000 dinars. The assets will be made up in the following proportions:

Total assets of Federation Fund	(in billions of dinars)
	72.238
Funds brought forward from 1984	15.200
Advance payment for 1985	57.038
--Obligatory share	32.593
--Share for association	24.445

The share of Federation Fund assets for association was a very small amount for 1984. Instead of approximately 18.2 billion dinars going towards this component, it is estimated that the amount was approximately 3 billion dinars by the end of the year. The difference of 15.2 billion dinars in the totals will be realized in the first quarter of 1985 in the form of an obligatory loan. Therefore, it is expected that in the form of the obligatory loan, assets will be realized amounting to 47,793,000,000 dinars for 1985.

Federation Fund assets in the period up to now have not been attained at the anticipated rates, especially the share intended for association of labor and resources. Thus, during the period 1981-1984, only 5,309,200,000 dinars were realized, or 11 percent of the assets for association anticipated for the period 1981-1985.

The following position has been established by federal resolution, as well as having been made a part of supplemental measures: "Every three months, a portion of the assets of the Federation Fund provided for association is to be paid to a special account of the Associated Kosovo Banks, based on agreement between the SAP of Kosovo and the other republics and the SAP of Vojvodina." (Resolution of the SFRY, page 35). With the implementation of this measure, assets of the Federation Fund intended for the association of labor and resources are to be used directly for the social and economic development of the SAP of Kosovo. Therefore, when balancing the assets of the Federation Fund, which amount to 32.6 billion dinars, one must take into account the possibility of realizing 3/4 of the the possible assets for association, or 24.4 million [as published] dinars.

Under conditions of high inflation, attaining unassociated resources at the end of the year in the form of an obligatory loan will not provide the needed results in the economy of the province. Thus, implementation of the policy of accelerated development of the SAP of Kosovo has been made difficult during the period 1981-1984.

#### International Credits

Foreign funds will also be used as sources of investments in fixed assets of the economy of the SAP of Kosovo for 1985. The current rate of utilization of these funds is very low (40 percent). It is necessary to intensify efforts to direct these funds at projects which can be quickly put into operation and directed at export.

Among other things, the effectiveness of utilization of these funds will depend on the implementation of established dynamics of investment expenditure.

The following totals from International Bank assets were used during the period 1981-1984.

(in millions of dollars)

1981	15.6
1982	37.3
1983	53.4
1984	41.5 (estimated)
1985	60.0 (anticipated)

Based on trends of foreign capital utilization manifested up to now, one should expect higher utilization of these funds in 1985. It is expected that the province's economy will receive approximately \$60 million (11.1 billion dinars) in foreign capital during this year.

#### Overall Management of Capital

It is first of all necessary to finance permitted loan segments which were made in 1984 and 1985, amounting to 51.9 billion dinars, out of available investment funds. As a part of the loan segments, overdrafts are expected to exceed 32.5 billion dinars, or 62.6 percent of the current loan segments.

The greatest recipients of overdrafts in 1985 will be large projects such as the Dobro Selo surface mine (8.748 billion dinars), Zinc Electrolysis (4.467 billion dinars), and Feronikal (4.6 billion dinars). When financing overdrafts, priority must be given to precisely those projects which can be put into operation and which can effect the province's industrial production as soon as possible.

And in spite of the obligations which the Federation is going to assume regarding payment of annuities involving credits from the International Bank, the province's obligations will still present a serious problem for further development. It has been appraised that some OALs will not be able to make annuity payments. The situation will be especially problematic regarding large projects which have been put into operation, or which are going to be put into operation.

In order to overcome this situation, investment potential must be reduced by approximately 9 billion dinars.

The largest recipients of exchange rate and guaranteed obligations in 1985 will be Feronikal (4.8 billion dinars) and Kosovo B (6.7 billion dinars).

Priority regarding free assets (30.4 billion dinars) should be given to coordinating existing capacities in the economy, to implementing manufacturing programs in leading areas, and to developing tertiary activities, etc.

#### Management with Regard to Activities

Industry will be the main recipient of investment money in 1985, because significant investments in large projects (Elektroprivreda, Trepca) are now in the process of being carried out in this area. Considerable resources must be directed at these projects in order to make them viable and to create conditions for diversification of investment activity into moderately-sized and small manufacturing programs.

Overdrafts indicated at Feronikal will present a special problem; the business operation of this gigantic enterprise in 1985 will depend upon the solution to this problem. Considerable capital must also be directed at Elektroprivreda and Trepca in order to continue construction of important projects.

All these investments will play a part in industry absorbing 68.2 percent of investment capital. Activity will be intensified within industry in order to implement manufacturing programs based on association of labor and resources.

Evaluations indicate that agriculture will have a 9.9 percent share of investments made in the economy. Priority must be given to intensifying primary production in both sectors, raising the level of equipment ownership and implementing the process of commassation. One can pretty much expect that considerable investments will be made in the individual sector as a part of the plan of regional development of the province.

Investments made in transportation will go towards completing work on the railroad hub in Kosovo Polje and making necessary preparations for the start of electrifying the province's railroad line on several major routes. In carrying out these investments, transportation will have a large share (7.4 percent) in the investments of the economy in 1985.

Significant investments must also be made in commerce (3.2 percent) which will be aimed at starting work on the construction of new capacities, on warehouses for goods, and on a distribution center.

Special attention in investment policy planning must be devoted to developing hotel and restaurant management and tourism, as well as to developing handicrafts which can have a very significant effect on employment. Carrying out investments in handicrafts will depend on implementing other measures and activities for encouraging the development of these areas.

#### Management with Regard to Industry Areas

The start of investment activity in some large non-ferrous metal projects and energy projects, and the delays in the development of these projects have contributed to the economy of the province being restricted by an unfavorable structure. This sort of structure will also be present in 1985 because very large investments in Elektroprivreda, Trepca, and Feronikal must be made.

Energy will absorb 27.4 percent of industry investment in 1985 and non-ferrous metals 44.5 percent.

Signed self-management agreements are a real possibility for implementing manufacturing programs in the metals group and in other manufacturing areas. With the intensification of investments in these areas, especially in the metals group, real possibilities will be created for initiating some structural changes in the economy of the province. The metals group will engage 10.7 percent of investments made in industry during 1985. Implementing programs based on the association of labor and resources within the textile, leather, clothing, and footwear groups will act to increase investment participation from 2.7 percent (between 1981 and 1984) to 6.8 percent in 1985.

9584

CSO: 2800/221



YUGOSLAVIA

IRON, NICKEL, ANTIMONY, OTHER ORE PRODUCTION, RESERVES

Iron Ore

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 29 Jan 85 p 5

[Text] In order for the current average production (based on the last three years) of 4.85 million tons to reach approximately 11 million tons in the next ten years, iron ore production must increase at a relatively rapid rate. Rapid production growth must occur to achieve steel production using entirely domestic sources. Imports of iron ore from Brazil and certain African countries (among others) cannot be continued.

Geological, mining and technological exploration of Yugoslav ore and iron-ore deposits should be continued by means of a well thought-out, consistent and well-organized policy of guaranteeing adequate financial investment and other conditions, and by the association of producers and consumers. One example can illustrate how such a policy can achieve sufficient, even superior results in broadening the domestic raw material base for steel production.

Less than 20 years ago, the Joint Fund for Financing Mining, Geological and Technological Exploration was established. Starting in 1966, and continuing through 1983, this fund's members - 12 iron ore, iron and steel producers - invested 238.5 million dinars in the fund. During the first year, a research commission was set up and charged with systematically and continuously following, analyzing and coordinating use of the fund's resources. From the time of the fund's establishment, through 1983, over 160 geological, mining and technological research projects have been realized, including 43 projects for which all necessary exploration and research has been completed.

Even though contributions to this fund have been uneven (both in terms of value and dynamics) the results obtained in new deposit exploration and lower and higher category rankings have been exceptional. Through this fund, 144.43 million tons of iron ore have been discovered, and approximately 260 million tons have been taken from the initial find to preparation stages. The investment, calculated according to the iron content of the ore (raw steel), has yielded 5,120 billion dinars. This means that every dinar invested in the fund has yielded 22,260 dinars (in today's prices) in final product.

On the basis of the most recent finds, Yugoslav reserves of iron ore will continue to occupy a position of top importance vis a vis ore reserves explored to date. This can be seen from the following comparisons.

<u>Mineral</u>	<u>Production 1946-1984</u>	<u>Reserves</u>	<u>Surplus</u>
Iron Ore	18.30	58.40	60.40
Copper Ore	52.48	24.60	23.60
Bauxite Ore	10.30	11.80	10.40
Lead and Zinc Ore	16.72	3.40	3.80
Antimony Ore	1.06	.80	.80
Quicksilver Ore	.80	.65	.45
Manganese Ore	.40	.25	.20
Chrome Ore	.40	.25	.40

(Table as published)

The degree to which particular ore deposits have been explored has been directly dependent upon the country's needs for the various metals, meaning the needs of industrial development, as well as the national economy's ability to systematically guarantee investment in geological, mining and technological exploration. In a relatively short period, the degree of iron ore exploration in Yugoslavia, in terms of natural and financial impact, has become quite sufficient. Ore reserves have grown by more than 30%, which serves to reaffirm the justification for joint investment, and financing of geologic-mining, and technological exploration for the sake of broadening the base of ferrous metallurgy.

#### Nickel Exploitation

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 29 Jan 85 p 5

[Text] A more successful balance assumes a higher level of professionalism in order to precisely evaluate ore reserves and wealth, because earlier mistakes have cost us dearly.

For the most part, nickel and nickel-cobalt reserves in our country are low in nickel content representing the main obstacle to the profitable exploitation of this metal. This problem is currently being exacerbated by market conditions, as well as other unfavorable conditions which are not only technological or economic in nature, but are caused by high inflation rates as well. The cost of extracting concentrate from low-yield ores, especially from composite metal ores, is very high for individual producers and, a relatively low amount of usable metal is derived from all phases of production. Construction of a refining complex for all phases of production is also very expensive, and most parts have to be imported. Therefore, exploitation of Yugoslav nickel reserves is complicated on a grand scale because of insufficient capabilities. As a result, any attempt to work out a balance or count on a profit is made more difficult, and would demand a variety of top experts.

When speaking of our own experts, it is no use denying that in recent years the feeling exists that this kind of skilled man-power, not just at the top, but at the middle and even entry levels as well, has no desire to work in areas outside of urban settings or centers. Among other reasons, without a doubt one of the major ones is lack of stimulation. Temporary assignments, or short-term engagement of known experts, do not yield the desired results. Not only is this activity lacking in continuity, but it also assumes a merely advisory character. It is our opinion that we should be worrying about why more experts are not out in the field, where mining-metallurgical complexes already exist or are under construction. It is no wonder, nor does it come as any surprise that in the last few years, massive investments in many areas have simply failed. Without a doubt mining profitability depends most of all on natural factors, but there can be no doubt that the human element, the need for experienced and tested professionals, is also important.

Research and evaluation of nickel ore reserves in this country demand an extremely professional and responsible approach in terms of the mineral economy and the economic strength of the country, perhaps more so than in any other sector of non-ferrous extractive industry. "Fenlje's" lesson has been a far-reaching and expensive one.

The potential of the physical and financial dimensions of our country's nickel reserves is immense, but considering the level of concentration, strategic-economic importance, and experience of exploration and planning reached in professional circles to date, it is clear that the situation has worsened. Nevertheless, on the basis of available published documented data, it can be concluded with great optimism that in the near future these reserves will become one of the leading raw mineral bases of the entire economy. The facts proving this assertion appear as follows:

#### PERCENTAGE SHARE

<u>Percentage Metal Content in Ore</u>	<u>Percentage Ore</u>	<u>Percentage Metal in Ore</u>	<u>Value in Billions</u>
0.6	30.48	35.01	544.16
0.8	25.40	26.30	471.56
1.0	19.59	18.47	372.98
1.2	14.80	12.70	300.90
1.4	9.73	7.52	201.50

It can be seen that low concentrate reserves, those that are 55.8 percent ore, and have 5.5 percent more metal content, comprise 55 percent of the total value. (Table and explanation as published)

Surplus reserves which still have not been explored in detail are greater than the current supply, but nothing more specific can be said, except that these reserves are seriously being calculated into the first projections of plans for the years 1990-2000.

In the last half of last year, Yugoslavia began to control nickel production, but the results obtained still only represent experimental production. The first official statistics are due in the first half of this year.

#### Antimony Production

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 29 Jan 85 p 5

[Text] Mineral deposits completely satisfy the Yugoslav market, despite depletion.

Our country is a traditional antimony producer, and remains one of the top European producers of this raw material. Yugoslav antimony production has continued without interruption for six decades. Yugoslavia achieved maximum production of 3,500 tons of antimony-regulus before World War II, which at that time constituted 40 percent of European production, and ranked Yugoslavia fourth in the world. In the post-war period, our share of world production has varied between 5 percent, and today's 2.65 percent.

Production has been uneven in the past few decades, and has gone from 1,468 tons, to 1,900 tons in recent years. It is interesting to show antimony's share in total non-ferrous production (silicon, copper, lead, zinc, silver and antimony) by period:

<u>Period</u>	<u>Total Produced</u>	<u>Percent of Market</u>
1971-1975	10,550	0.51
1976-1980	9,785	0.35
1981-1983	4,965	0.30

Stagnation, followed by a noticeable fall in antimony production since 1970, resulting in inadequate usage of smelter capacity and a fall in profitability for mines as well as smelters, has brought antimony and antimony alloy producers to a very difficult economic position. In recent years Yugoslavia has imported ore and antimony concentrate in order to ease the situation.

In 1976, 1,935 tons of mineral concentrate, valued at 29 million dinars, were imported from Turkey, Morocco and the People's Republic of China.

On the other hand, this country exports approximately 60 percent of its total antimony production which, under present market conditions, also

creates certain difficulties due to the sensitivity of this raw material to any global market vicissitudes. Unfortunately, these vicissitudes are not solely dependent upon economic factors. Because antimony is an important strategic-technical metal, political factors and other machinations have an effect upon the profitability of mines and smelters, not only in this country, but in other, usually underdeveloped, countries as well.

#### Favorable Metal Content

Despite their significant depletion, and noticeable fall in percentage metal content, our ore deposits will completely cover domestic needs for quite some time. We are fortunate in that according to present finds, there are a great number of sites, albeit small in quantity, but with high metal content, in this country, especially in the western parts. Generally, these deposits are not being exploited today due to low profitability, but this does not mean that under more favorable market circumstances these ore deposits would not come to the fore.

Due to its availability here, and keeping in mind that world supplies of this ore are low, antimony assumes a position as one of the most valuable raw materials in Yugoslavia. This makes the world shortage of this metal especially significant. Furthermore, regardless of the current unfavorable conditions for antimony production, this metal will assume a prominent role in the international division of labor.

#### Exploration for the Future

Ore deposits can be found all over this country. From an economic point of view, the most interesting deposits are those consisting of pure, or high concentrate antimony. Seen from the standpoint of structural metallurgical zones, the most important deposits are those mining areas in the Serbia-Macedonian regions, the most important of which are: the Podrinje, Ivanjic, and Kopaonik regions, followed by the Bujanovac, Lojan and Alsar regions. The most significant area where this ore is mined is, of course, in Podrinje. In fact, this is the only Yugoslav site where antimony is actively being mined at the moment.

Antimony production in this country grew 2.7 times between 1945 and 1975. However, metal content fell noticeably during this period. Consequently, the situation requires a specific approach and treatment in dealing with the further development of antimony, antimonous alloys, and antimonous lead production, especially in view of a series of other unfavorable economic, organizational and man-power problems, and most of all, due to the level of exploration and planning.

The complex and varied problems surrounding antimony preparation and production revolve around the fact that in recent years more and more attention has been directed toward exploration of and technological experimentation with complex metallic minerals in raw antimony. Such significant advances have been made in this area that complex metal ores (arsenic and antimony) found in Alsar, Lojan and Lova-Fajicevo gora and Rujevac, in the near future are expected to become valuable sources of raw material for obtaining antimony regulus, alloys and antimonous lead.



YUGOSLAVIA

# PERISIN DISPUTES ECONOMIST BAJT ON INTEREST RATES

Zagreb DANAS in Serbo-Croatian 9 Apr 85 pp 43-45

[Article by Dr Ivo Perisin: "Response to Dr Alexandar Bajt: Neither Smarna Gora Nor Samp"]

[Text] Esteemed readers,

I do not consider it necessary to answer Professor Alexandar Bajt, however many distortions and jabs were contained in his article entitled "Open Letter to Dr Ivo Perisin." There are several reasons why I take this position.

The first and basic one is that Professor Bajt has sidestepped the crux of the dispute and has concealed the fact that there is between us a difference in views concerning our economic policy practice and evaluation of the direction it is going in, and a related difference concerning the measures which ought to be taken. This is well known to him, not as of yesterday, but since 1975, except that the differences have been notching upward since 1981. He was stung by my decided positions to the effect that we a) "lost the anti-inflation strategy at the very first step of carrying out the Long-Range Program," b) that that strategy was displaced by an "alternative program, one that is counterproductive and is leading toward 100-percent inflation" and c) "that there are involved in our country a specific structure and specific production relation which need to be built up and which might be called a 'market economy of associated labor' and that in that model it is not possible to copy the classic market relations and instruments which correspond to the conventional market structure."

The second is that he supposedly used an excerpt from one part of what I had to say at the 16th Meeting of the LCY Central Committee which was published in DANAS, and that was nothing more than a trick which he needed only to try to discredit me professionally in the eyes of uninformed readers, while at the time when the 16th Meeting was held, he already had my paper on "Methods of Anti-Inflation Policy," in which, purely as an illustration, I deal with that fragment on mandatory long-term loans which the economy must furnish to finance various purposes (self-managing communities of interest in material production such as the electric power industry and the large-scale economic infrastructure, and then to the federal fund for credit financing the faster development of the underdeveloped republics and Province of Kosovo, the loan for

underdeveloped opstinas and the resources set aside to joint reserve funds of sociopolitical communities). In that paper I especially emphasized "that this question of interest-rate treatment of the financial lendings of the economy is being raised here solely because of the calculations concerning so-called real interest rates, without entering into the complicated question of the procedure for financing those purposes which are financed from those sources. In addition, at the 16th meeting, so that there will not be any misunderstandings whatsoever, I especially emphasize: "There are many other computations. In the Long-Range Program it was agreed that the interest rate must be the same on both sides," so we put the question: "Why did we not implement that?" And I immediately answered: "Then the underdeveloped will not be able to accept those resources at a rate of 60 percent, so that that will have to be rebated, and the question arises of how to finance the electric power industry, which is not operating with real economic rates."

Professor Bajt used the fragment out of context as a trick to see if he could bring down on me the anger of representatives of the underdeveloped republics and Kosovo, in which I am sure that he cleanly missed his mark, since their representatives know my positions and judgment that the interest rate policy that has been conducted--and not only interest rates, to be sure--is resulting in a "shameful redistribution" to the economy's disadvantage, and to the advantage of a segment of the population, but also to the disadvantage of certain regions of the country, and that is the crux of our dispute.

The third reason is that I am firmly resolved to direct my energies toward constructive clarification of the fateful issues which can no longer be avoided, since we cannot continue on any longer in the same way. Incidentally, the country's political and government leadership has become aware of this and has finally decided to step up the effort toward a thorough examination of the numerous complicated relations concerning which, as you are aware, there are major differences in views.

#### Mathematics and Politics

The fourth reason is that we, Professor Bajt and I, are very deeply involved in all this. He is a member of the commission to set the Long-Range Economic Stabilization Program in motion and the head of the institute of the School of Law at Ljubljana University whose work or whose publication PRIVREDNA KRETANJA JUGOSLAVIJE is being financed by the Federal Executive Council, so that in that way he acts as a principal adviser, and I would even say the head of the economics staff of our "White House." In those positions he has had a unique and unlimited opportunity to get an extensive hearing for his own views and analyses even at the top of our political system and government administration. As he is well aware, I am a member of the working group of the Presidium of the LCY Central Committee for examination of the basic issues outstanding and the chairman of the Federal Social Council for Economic Development and Economic Policy. There are, then, unlimited opportunities for us to clear matters up. I am also a member of the LCY Central Committee, who on the basis of his responsibility must even here come forth with his own views, and Professor Bajt likewise has the opportunity to present his judgment to that same Central Committee on every issue, which incidentally he has done this time with his

lengthy essay on the work done by a group of specialists who basically supported the initial paper by Professor M. Cirovic, whom the Presidium of the LCY Central Committee invited to join me, B. Colanovic, governor of the National Bank of Yugoslavia, and the federal secretary for finance in furnishing an evaluation of implementation of the Anti-Inflation Program and proposals.

As you see, our differences involve more than some petty computation of interest rates and grammar school arithmetic, much less the "Croatian economy," "Noneconomic" and "Non-Croatian" examined in isolation, and especially not--that is a flagrant imputation--my not having noticed that this involved the relationship between the advanced republics and the underdeveloped "which," according to Bajt, "as a politician I should not have done." Likewise we are not dealing here with an error in computation or in the calculation of interest rates, since before he sent the "Open Letter . . .," he had in his hands the paper which I drafted with a group of collaborators and was entitled "Contribution to Examination of the System for Financing Reproduction and Its Reflection on Ownership Relations and Inflation," which stands in opposition to his views concerning our policy, and that is not confined to the rate of interest.

Those differences incorporate fateful economic and political issues which have to be taken up. The LCY must have its own attitude on all these matters. It is because of those issues which are still outstanding that I speak, write and attempt to elaborate at least those which are within the range of my knowledge. I assume that they are important. I have felt that Bajt's concept was dangerous for quite some time now. That is, whenever I come into conflict with him, either explicitly or implicitly, I do not do so for myself, but out of a belief that it concerns our future. That was the case in 1975, when I opposed his views on the causes of our instability and on the directions of action to be taken.

I have already said that Professor Bajt also had an opportunity to examine my most recent paper on this topic, in which I show how the shortage of money accumulation in our economy came about and how the economy's indebtedness is part of the system, since legislation requires it to have excessively large resources in banks, and therefore economic entities must in nominal terms take an ever larger amount of short-term credit on which they pay an ever higher rate of interest, while the banks pay them an incomparably lower rate on their funds. It is evident from this elaboration, although it is only a brief statement of my views, that I derive the actual level of the interest which the economy is paying from the entirety of relations, not as it is done by Professor Bajt. Here again there are no oversimplifications at all. Considering these conclusions of mine to be particularly important to our effective economic and social development, I placed emphasis on them by putting my head and reputation on the line. Can that be dishonest? Professor Bajt considered himself injured even by that and screamed as though he were bitten by a poisonous snake. Why? Well, because the IMF found a point of support in his elaborations. Incidentally, I know precisely when Bajt's elaboration was delivered to the director of the European department of the fund at the very outset of the ballad with the fund. I was therefore also aware that he would react to my views like a wounded animal. I am only surprised at the similar

reactions on the part of some people whom until recently I believed to be on the same side of the barricade with me. I knew that not only Professor Bajt, but many others as well, would make an appearance, since this is a conflict that concerns even the line of development of this society. That is the reason for Professor Bajt's anger, in which he has vented all his spleen.

Isn't it strange that Professor Bajt was unable to understand that? Had he succeeded in that, only then would we be able to discuss relationships and policy, sticking to what precludes haste and demands high professional competence and a clear political commitment, so then we could see who is not registering the difference "between Smarna Gora and samp."

Forgive me, but how is it that Professor Bajt is not ashamed to impute to me a failure to understand the "difference between lending and borrowing rates on the one hand and the difference between the nominal rate of interest and the rate of inflation, that is, the positive real rate of interest, on the other"? My answer can only be that he, and he is not the only one, has not entered into the complicated relations in our system for financing reproduction, so that he has neglected what must not be neglected, and that is the interconnectedness between extraction of money income from the economy and bank credits, the regime governing the resources of the economy, the credit financing mechanism, and as an addition to that the game of borrowing and lending interest rates.

So that it is he rather than I who has equated "Smarna Gora and samp." On the basis of an oversimplification he drew the conclusion that the only real rate of interest is one which is higher than the rate of inflation, and he thereby made an already impossible and absurd system for financing reproduction still more absurd. That sector of ours which is short of finances--and that is the economy--is put in an even worse shortage. That is one of the reasons why I am addressing the public rather than Professor Bajt.

Since Professor Bajt is not in the least interested in the fact that organizations of associated labor in the economy have through the borrowing rates of the banks received only 15 percent of the enormous interest "pie," although in 1984 their share in the deposit base of the banks was 35.1 percent. How is it that it means nothing to him either that the economy has a share of 75 percent in bank revenues from interest, that is, it pays 75 percent. According to Bajt's interpretation, even that is not enough, since the economy supposedly is still not paying a real rate of interest on the credits taken!?

The question that arises in this connection is one of the size and origin of that debt, but that is another story. So let us get started! The short-term credits of the banks granted to the economy amounted to 74.5 billion in 1974. Even by 1983 they had climbed to 833 and in 1984 to 1,153 billion. That is, between 1974 and the end of 1983 they increased 11-fold, while the nominal social product grew 13.6-fold. Let us assume that they grew at the same rate. What kind of conclusion can be drawn therefrom? The only conclusion is that the economy--since it had to carry on its own production and trade--took the same real quantity of "transaction money" which was lacking. Even if the rate of interest had not been rising, it would have paid an 11-fold larger amount



of interest on that revalued amount, and the real amount of interest would have remained unchanged. If we now raise the rate of interest on the revalued and de facto same real amount of short-term credits, then in real terms it is paying much more, and that by whatever amount the interest rate was raised. At his real rate of interest it would have paid 8- or 10-fold more, yet in real terms that economy did not take one dinar more in short-term credit than before.

Who is supposed to get that increased amount of interest? The one who supplied that money. And who is supplying that money? Notes have been issued, and that a note issue ex nihilo! So, in an absurd system where the economy has almost no occasional working capital of its own, since that is the way we created it when we proclaimed it to be a self-managed economy instead of a government economy, it must, in the view of Professor Bajt, pay 493 billion (in 1983) on those short-term credits from note issue, which costs nothing. To whom? To the government or to the banks which create the money. Someone who is not familiar with the note issue mechanism will say that that note issue has a basis in sight deposits. Come on now! But even if I accept that, then I must ask what the interest rate is on sight deposits. On some it is 0 percent, on others 4 percent, and for individuals 7.5 percent. Now the question that arises--if that were the case--is why on an amount of funds which costs approximately 6 percent it paid 60 percent and tomorrow 70 percent?

Isn't it Professor Bajt who in this position has confused concepts and thus has equated those relations with the ones which must exist in the capital sphere, and those are loans which are granted on the basis of accumulation or saving, where it is important that the capital borrowed be returned in the same real amount, which is achieved by revaluation of the loan or with the real rate of interest. However, this takes me into another part of the complicated relations which in our country have gone out of whack--since euphoric extremes were gone to with the forcing of an alienated system of the formation of money accumulation, which our banks, aided by many things, then multiplied and thus created an eruptive volcano of the miserable inflationary financing of investment projects, which led us to embrace the foreign debt, which I have written about and written about, but my position has not been taken up because of the domination of statism, of our bankocracy, which then fell apart into eight competitive pieces, with eight statisms, eight monetaries systems and eight payments balances and exchange balances, which we have utterly failed to patch together into the entirety of an associated labor organized along the principles of self-management and that would pull the wagon out of the mud.

Why am I writing all this now? I assure you that I am not doing it because of Professor Bajt. I am doing it because the question intrudes of how that producer is to pull the wagon out of the mud into which we are falling more and more, and that above all because we have overburdened that producer and proclaimed him to be in deficit, and thereby concealed all the other deficits--above all that budget deficit. With this twisting of the facts we have also twisted policy, and that distorted policy has been unable to mobilize the producers and get our economic machine moving.



Is there a need for us to write about all this to the International Monetary Fund, so that it can then render judgment? We must make the judgments ourselves and not allow the world financial bureaucracy to make the judgment in our place!

### The Boot and the Last

We ought to oppose it with our own views and prevent their bureaucrats from going around and seeking allies who advise them "put on the pressure, since there has been wavering here in our country." That bureaucracy of the fund and its officers of the watch--let me just mention in passing, since Professor Bajt proposed that we write to them so that they might judge--do not know the labyrinths of our system for financing reproduction. Still worse than that, however, is that there are many on our side who also do not know them or who underestimate them, so that there is a wavering which makes it impossible to explain even the most elementary things, such as the difference between our mechanism for credit financing and theirs, in which we calculate interest on credit extended, and they, using a system of interest rate numbers, only on that portion which has been actually used in the period up to its due date. And there are many such differences, and it is because those differences are not honored that our "boot" is being made on someone else's last. For that reason it not only pinches, but it is even opening up sores and making a healthy person sick.

But it was agreed that those financial relations and the system for financing reproduction should be changed. I assert that in the Long-Range Program there is a kind of veto clause which made implementation of the basic conceptions about the transition to real relations contingent upon financial consolidation, and that is where things came to a halt, since the inner workings of relations in financing reproduction were not entered into. That accounts for the differences in views. To be sure, they are also ideological and political.

The problem, then, lies in our commitments. The destructive course of inflation with the shameful redistribution to the disadvantage of the economy and to the benefit of a portion of the population, the enfeebled productive force of our economy and its inability to use the enormous potential of its disordered capacity and its inability to export, the decline in the standard of living for a large portion of the population, excessive employment and the especially large overhead at all points, and the impossibility of employing young people--will force us to enter into the viscera of our relations in reproduction. In those viscera are all those relations to which I am referring when I speak about credits, deposits, the regime governing the money resources of the economy which have been scattered among a multitude of accounts in banks, the method of settling obligations to the community and the social services, and the technical procedure for credit financing, and indeed even those loans which the economy must make, and society feels that we have thereby resolved everything.

With that examination we would also arrive at the point of asking ourselves how it is that the dinar which belongs to the economy "is worth" 4 percent in the account in the Social Accounting Service, but 50 or 60 percent when that

same dinar, via a bank, is loaned to the economy as credit? We will also come to the point of seeing how wrong are all those who have accepted my view that this is absurd and believe that this could be solved by raising the rates of interest which the banks pay on the resources of the economy.

Only then could we arrive at the point of imagining what kind of society it is in which the dinar interest alone on the foreign exchange accounts of individuals is twice as great as the total amount of net personal incomes, and when we get to that point, we will have to go further and see the kind of chaos that has been brought about by the devaluation of the dinar, which at the time of Tito's death was exchanged at a rate of 20 dinars for \$1. And today? We will find out how immense negative differences in rates of exchange were created without a vigorous policy of the single rate of foreign exchange and that we have not augmented the inflow of foreign exchange, but reduced it.

Oh, how did I get into this wasp's nest, haven't I had enough of "lessons" about interest? But there it is, that is life--thorny, painful, but nevertheless beautiful when struggle and ideals adorn it.

I might end with that and recommend to all those who want to argue with me that in the next issue of KOMUNIST they read "Contribution to Examination of the System for Financing Reproduction and Its Reflection on Ownership Relations and Inflation," in which I explain the credit-deposit trick and those computations of interest.

7045

CSO: 2800/316

YUGOSLAVIA

DEVELOPMENT OF CHEMICAL INDUSTRY, 1970-1984

Duesseldorf CHEMISCHE INDUSTRIE in German Feb 85 pp 86-90

[Article by Stjepan Levata and Zoran Popovic\*: "Substitution of Imports: Target of the Chemical Planning for Yugoslavia"]

[Text] During the last 20 years the chemical industry of Yugoslavia experienced a dynamic development with a rate of increase of production lying clearly above the industry average. The lack of raw materials and for a long time only insufficiently carried out construction and expansion of capacities for chemical raw materials and intermediates allowed the chemical production of the country to become dependent to a great degree on such imports. One of the most important goals of the long-range chemical planning of the country is to reduce this dependence.

During the past 20 years the production of the Yugoslav chemical industry constantly grew more dynamically than the balance of industrial production. In the time from 1970 to 1982 there was in the chemical industry a rate of increase of 9.7 percent annually, in the balance of the industry 6.5 percent annually. Thus, the portion of the chemical industry in the total industrial production rose from 7.5 to 8.4 percent. During the same period the value of the chemical production rose also from \$986 million to \$4.810 billion, and the specific domestic consumption of chemical products per capita increased from \$56.50 to \$243.20.

Over 75 percent of the chemical products are processed further, in which case the internal consumption, i.e., the consumption of the chemical products within the chemical industry, dominates. According to the results from a comparative intermediate analysis in 1978 about 42 percent of the value of chemical production, that was designed for further processing, returned to the chemical industry. Along with this internal utilization agriculture with 12 percent, the textile industry with 5 percent and the rubber industry with 4.5 percent possess the largest portion of the consumption of the chemical products for reprocessing.

The low level of the production of monomers and chemical intermediates in Yugoslavia is one of the main reasons for the great dependence of the

---

\*Federal Committee for Energy and Industry IHMT-CTE, Belgrade

chemical industry and other branches of industry (the more important consumers) for the imports. If consideration is given to the fact that among the articles being imported by the chemical industry, whose portion of the input comes to 37 percent, organic as well as non-metallic, metallic, and biological raw materials take an important position, the right dimension and structure of the imports, which is directly or indirectly connected with the chemical industry, finally become clear.

The chemical industry is a big consumer above all of mineral raw materials and to a smaller extent also of biological and metallic raw materials. The portion of imported raw materials of the total consumption is very large. Outside of pyrite, which is obtained totally from domestic sources, all the other raw materials for large quantity utilization are imported either wholly or partially (phosphates, potassium salts, salt, sulfur, borates, titanium ores, petroleum, natural gas, as well as a portion of cellulose and fats).

Table 1 lists the imports of some raw materials, which were consumed in 1981 and 1982 by the chemical industry of the Socialist Federal Republic of Yugoslavia (SFRY). In the case of primary gasoline it was assumed that 70 percent of the gasoline consumed comes from imports, that 22 percent of the original ended up as pyrolyzed or cracked gasoline, and that the price of the primary gasoline lies about 50 percent above that of the crude petroleum. All the values of the imports were calculated on the basis of the import prices applicable to that particular year.

Table 1: The consumption of imported raw materials by the Yugoslav chemical industry

Raw Material	1981		1982	
	Tons	x \$1000	Tons	x \$1000
Primary gasoline	328,700	140,519	327,600	137,592
Natural gas	99.0 x 10 <sup>6</sup> m <sup>3</sup>	15,460	111.4 x 10 <sup>6</sup> m <sup>3</sup>	17,400
Crude phosphates	1,223,000	93,380	1,173,708	75,335
Potassium salts	422,000	58,460	415,574	55,480
Boron salts (portion for the chemical industry)*	14,340	4,210	14,050	4,120
Halite	102,265	2,372	96,140	2,230
Sulfur	16,867	2,770	14,444	2,440

\*Estimated

Imported chemical raw materials represent as a value about 31 percent of the production of the total industry, about 42 percent of the chemical industry, 36 percent of the textile industry, and as much as 49 percent of the rubber industry.

In Table 2 the chemical imports from 1970 to 1982 are listed. The highest values were reached in 1981 with \$2.2 billion. Chemical raw materials claimed 71 percent of this sum and in 1982 as much as 75 percent.

The reported data show how extensive the importing of chemical products is for the needs of chemical industry as well as those of the other branches of industry (46 percent of the imports after being processed ends up in other economic sectors).

If, in addition, the importing of chemical raw materials is considered and also whose value is added to that of the imported chemical products, a sum of over \$2.5 billion is reached. The fact that this sum comes to more than 20 percent of the total imports of Yugoslavia, shows clearly the importance and the need for a reduction of the importing of chemical products and intermediate compounds. This means an orientation toward the substitution of imported chemical raw materials, industrial intermediates, and products, where the actual conditions as well as economic advantages exist.

Table 2: Development of the chemical imports of Yugoslavia from 1970 to 1982 (x \$1,000,000)

(1) Jahr	(2) Chemische Produkte (SITC 5)	(3) Chemie- fasern (SITC 266)	(4) Synthese- kautschuk (SITC 231.2)	(5) Chemische Produkte, insgesamt
1970	266.6	12.7	11.1	290.4
1971	297.3	14.5	10.8	322.6
1972	348.8	18.4	14.1	381.3
1973	449.9	24.4	16.5	490.8
1974	811.0	57.7	35.3	904.0
1975	833.9	48.5	32.7	915.1
1976	790.7	44.5	33.6	868.8
1977	988.6	50.9	46.3	1 085.8
1978	1 139.7	48.6	45.7	1 234.0
1979	1 653.0	68.8	64.8	1 786.6
1980	1 824.2	61.4	84.5	1 970.1
1981	2 026.7	79.8	99.6	2 206.1
1982	1 657.7	83.4	90.9	1 831.1

Key:

1. Year
2. Chemical products (SITC 5)
3. Chemical fibers (SITC 266)
4. Synthetic rubber (SITC 231.2)
5. Chemical products, total

#### Varying growth of the areas and branches

The chemical industry after the war had reached a dynamic growth in some areas (mineral acids, fertilizers, cellulose fibers, and all types of manufacturing chemical products), in other areas a slow one; in the organic raw materials industry there was even a stagnation of many years.

In Table 3 the development of the production of important chemical products is shown for the period of 1972 to 1982.



Table 3: Production, in tons, of important chemical products in Yugoslavia

	1970	1975	1980	1981	1982
Basic inorganic chemical products					
Chlorine	45,564	43,244	72,735	112,906	108,488
Ammonia (100%)	346,000	475,000	492,000	512,000	515,000
Hydrochloric acid	24,551	41,926	79,183	86,678	89,379
Nitric acid (100%)	579,000	634,000	691,000	726,000	729,000
Sulfuric acid (66° Be)	747,000	935,000	1,186,000	1,248,000	1,183,000
Phosphoric acid (100%)	132,300	164,497	279,296	295,862	271,922
Sodium hydroxide (Solvay)	45,510	45,781	55,747	45,642	50,939
Sodium hydroxide (electrolytic)	51,138	51,696	80,638	131,570	118,262
Ammonium nitrate (comm., 100%)	6,406	19,563	19,726	22,344	30,747
Ammonium nitrate (fertilizer)	0	409,100	374,738	381,421	391,099
Sodium carbonate	113,361	146,777	129,069	147,156	181,880
Sodium hypochlorite	28,515	38,761	68,768	84,444	76,752
Sodium tripolyphosphate	28,341	44,475	57,135	72,586	72,866
Aluminum sulfate	26,819	56,023	55,098	56,596	57,052
Potassium carbide	113,000	47,682	38,082	40,356	39,002
Potassium phosphate	-	-	26,200	27,059	33,640
Sodium silicate (100%)	13,051	13,794	10,165	15,120	16,791
Basic organic chemical products					
Acetylene	4,287	5,819	7,847	8,465	8,220
Ethylene	20,827	16,412	113,453	143,430	167,474
Propylene	10,073	8,869	48,661	62,942	78,259
C <sub>4</sub> fractions	4,739	6,187	32,339	36,307	47,579
Benzene	2,335	39,141	18,207	40,259	21,182
Toluene	-	21,288	5,804	7,051	6,325
o-Xylene	-	11,239	4,519	3,669	75
m,p-Xylene	-	37,119	14,226	12,785	127
Ethylbenzene	628	8,327	3,173	2,072	-
Methanol	4,970	-	95,451	91,544	102,526
Formaldehyde	33,377	72,585	122,960	122,609	121,748
Cumene	8,940	13,122	7,775	9,777	-
Phenol	7,565	7,968	-	-	-

Table 3: continued

	1970	1975	1980	1981	1982
Acetone	4,185	4,435	-	-	-
Styrene	8,394	10,318	8,847	7,101	3,765
Phthalic anhydride	1,211	975	16,766	21,566	22,350
Maleic anhydride	-	-	5,884	8,493	8,058
Vinyl chloride monomer	15,804	6,300	20,773	105,193	93,296
Dodecylbenzene	3,663	3,600	6,841	9,576	6,894
Dodecylbenzenesulfonate	8,996	13,155	12,700	17,800	12,820
Trichloroethylene	5,601	741	6,198	7,815	5,614
Monochloroacetic acid	925	1,180	1,756	1,761	1,547
Carbon disulfide	11,408	13,384	4,548	7,379	8,518
Propylene oxide	-	-	17,003	15,003	15,507
Polyols	-	-	18,676	16,437	18,054
Plastics and resins	113,947	201,477	516,330	560,628	524,209
Carboxymethylcellulose	3,935	4,138	5,085	5,141	4,366
Nitrocellulose	3,167	3,145	5,936	5,936	4,868
Cellophane	4,740	9,308	9,005	8,988	8,190
Polystyrene	7,237	12,597	45,179	41,293	29,457
Polyethylene (LDPE)	20,275	20,179	67,547	76,134	83,363
Polyethylene (HDPE)	-	-	31,925	39,792	45,745
PVC	23,116	40,333	139,477	155,398	127,358
PVA (100%)	8,255	11,661	17,200	22,749	18,275
Phenoplasts	6,449	22,815	25,902	29,872	26,867
Aminoplasts	20,407	47,866	84,721	85,659	82,592
Polyester resins	6,122	11,255	24,438	24,457	20,868
Synthetic fibers	8,690	19,293	49,860	50,968	61,164
Polyacrylonitrile fibers	6,145	14,421	16,418	16,686	25,048
Polyamide fibers	2,545	4,062	6,440	7,111	8,405
Polyester fibers	-	810	23,306	23,386	24,830
Polypropylene fibers	-	-	3,696	3,785	2,881

In the case of inorganic raw materials during the period from 1970 to 1981 there was an increase in production of chlorine, sodium carbonate, sodium tripolyphosphate, and sodium hypochlorite. In the last two years, however, a few new production lines for the production of inorganic acids were started up. By 1985 the expansion of some new capacity will be completed, and so the production of sulfuric acid will reach 2.2 million tons annually, nitric acid 1.45 million tons annually, and phosphoric acid 0.55 million tons annually.

In 1983 the production of inorganic chemicals was about five times as great as that of organic chemicals, which shows clearly the underdevelopment of the organic chemical industry, above all the petrochemicals. The main centers of the petrochemical raw materials industry are found in the SR Croatia and in the SAP Wojwodina. These are HIP Pancevo (ethylene, propylene, C<sub>4</sub> fractions, ethylbenzene, styrene), INA Refinery Nafta Rijeka (benzene, toluene, o-xylene, ethylbenzene), INA Lendava (methanol, formaldehyde), and since last year INA Refinery Sisak (benzene, toluene, o-xylene, and p-xylene) as well as DINA Krk (VCM, PE). It should be mentioned that in the coming years further production lines will be put into operation, such as, for example, for methanol and acetic acid in Kikinda, for ethyl chloride at Krk, for LAB and TDI in Baric, etc.

The plastics production in our country developed very slowly for a long time. The production of polycondensates moved more quickly than the development of the polymers (smaller investment, technologically simpler production, and a tie in with the requirements of the plywood industry). Only by 1979 did the production of polymers exceed the production of the polycondensed resins. Recently some increases in capacity were put on line for the production of PVC (Pancevo, Split, Sabac, Zadar), HDPE (Pancevo, Zagreb, Krk), LDPE (Pancevo), Polystyrene (Zagreb), and polypropylene (Odzaci). It is expected that the production lines in Split (50,000 tons PVC annually) and Zagreb (22,000 tons PS annually) are also being put into operation. The production in this area is also taking place to the extent of 57 percent in Croatia and 17 percent in Wojwodina.

The production of synthetic fibers in Yugoslavia began in the 1960's. First polyacrylic fibers were produced, then polyamide (1967), polyester (1975), and polypropylene fibers (1977). Recently a couple of new production lines for the production of polyester (Pazin, Varazdin, Skoplje) as well as polyamide (Leskovac, Ljubljana) were also started up.

A comparative presentation of the operating production lines and of those under construction at that time is given in Table 4. The capacities of the production of raw materials (inorganic and organic) as well as synthetics were summarized, that is of the products that are dominant in the trade deficit of the Yugoslav chemical industry.

In this overview some important production complexes are missing whose completion during this planning period was scheduled but then, however, postponed, such as, for example, the second and third phases of the petrochemical plant on Krk (styrene, ethylenebenzene, ethylene, propylene, C<sub>4</sub> fractions, butadiene, polyethylene) or in Iplasu, Koper (oxo-alcohols, acrylates), in Sisak (terephthalic acid), in Ljutomer (caprolactam), etc.

Table 4: Important production capacities of Yugoslav chemical raw materials industry

Products	Capacity on Jan. 31, 1984 (tons/ann.)	Capacity under construction (tons/ann.)	Total capacity (2 + 3) (tons/ann.)
<b>Inorganic chemicals</b>			
<u>Raw materials</u>			
Ammonia	1,125,000	282,000	1,407,000
Chlorine	216,000	-	216,000
Nitric acid (100%)	1,243,000	210,000	1,453,000
Phosphoric acid (100%)	558,500	160,000	718,500
Sulfuric acid (66° Be)	2,597,500	475,000	3,072,500
Sodium hydroxide (Solvay)	50,000	-	50,000
Sodium hydroxide (electrolytic)	255,000	-	255,000
Potassium hydroxide	6,500	-	6,500
Aluminum sulfate	80,000	13,000	93,000
Ammonium nitrate (comm., 100%)	73,000	-	73,000
Sodium carbonate	264,000	-	264,000
Sodium tripolyphosphate	137,000	-	137,000
Sodium sulfate, anhydrous	45,000	-	45,000
Sodium sulfate, crystalline	20,000	-	20,000
Sodium perborates	50,000	-	50,000
Sodium silicates	21,000	18,000	39,000
Calcium carbide	50,000	-	50,000
Copper sulfate	26,000	2,000	28,000
<b>Organic chemicals</b>			
<u>Petrochemical raw materials</u>			
Ethylene	332,000	-	332,000
Propylene	115,000	-	115,000
C <sub>4</sub> fractions	53,000	-	53,000
Butadiene	20,000	-	20,000
Benzene	188,000	-	188,000
Toluene	161,000	-	161,000
o-Xylene	71,000	-	71,000

Table 4: continued

m,p-Xylene	57,000	-	57,000
p-Xylene	73,000	-	73,000
Ethylbenzene	13,000	-	13,000
Methanol	165,000	198,000	363,000
Carbon	42,000	-	42,000
<u>Monomers and intermediates</u>			
Styrene	8,000	17,000	25,000
Cumene	10,000	10,000	20,000
Phenol	6,000	9,000	15,000
Acetone	3,500	3,900	7,400
Ethylene dichloride	160,000	150,000	310,000
Vinyl chloride	300,000	-	300,000
Formaldehyde	193,000	-	198,000
Acetic acid	-	100,000	100,000
Propylene oxide	18,000	-	18,000
Polyols	20,000	-	20,000
Isocyanates (TDI)	18,500	20,000	38,500
Phthalic anhydride	50,000	-	50,000
Maleic anhydride	13,000	-	13,000
Dodecylbenzene	20,000	-	20,000
Alkylbenzene, unbranched	-	50,000	50,000
Diethyl phthalate	55,000	-	55,000
Methyl tert-butyl ether	-	38,000	38,000
Phosgene	23,000	25,000	48,000
Synthetics			
<u>Synthetics</u>			
Polyvinyl chloride	271,000	50,000	321,000
Polyethylene (LDPE)	198,000	-	198,000
Polyethylene (HDPE)	50,000	-	50,000
Polypropylene	30,000	-	30,000
Polystyrene	54,000	22,000	76,000



Table 4: Continued

<u>Synthetic fibers</u>			
Polyester fibers	74,000	23,000	97,000
Polyamide fibers	28,000	-	28,000
Polyacrylonitrile fibers	26,000	-	26,000
Polypropylene fibers	6,500	3,500	10,000
<u>Synthetic rubber</u>			
Styrene-butadiene (SBR)	40,000	-	40,000

#### Growing consumption of agrochemicals

Yugoslavia lags behind many of the countries in Europe in the consumption of chemical products, particularly, however, behind the developed western countries.

Its present level of specific consumption of chemical products (\$243.30 per capita of the 1982 population) was already reached in 1972-1973 in the developed countries. It should be added here, however, that the value of the specific consumption was estimated too low because of frequent devaluations of the dinar.

In Table 5 the development of the consumption of the more significant chemical raw materials in our country is presented for the period from 1970 to 1982.

From the data in Table 5 a large consumption of inorganic chemicals can be verified; these are needed for the production of fertilizers. It is characteristic that the new production capacities for ammonia, sulfur, and phosphoric acid completely provide the the growing need for fertilizer or rather encourage a growing consumption of agrochemicals and even have as a result definite surpluses for the export trade.

The consumption of petrochemicals in contract remained quite low during the period of 1970 to 1982. This is understood if it is considered that in 1982 in our country only a few factories used olefins, aromatics, and methanol (HIP, Pancevo, OKI Zagreb, "SODASO Tuzla, "IPLAS" Koper, KHK-Lukavac, INA Lendava, HI "AZOT" Gorazde, and HINS Novi Sad). The demand for monomers developed significantly more quickly, but indeed with some delay to regard to the actually needed production of the polymeric compounds. This applies particularly to synthetic fibers for whose production no single monomeric compound is produced within the country and thus must be imported in finished form. In the case of the production of plastics the situation improved since recently the production of a few monomeric compounds had begun (VCM, AFK, AMK, polyols, TDIO). It should be emphasized that in the development plan the expansion of a number of production lines is provided which could fill the need of the country for important monomeric compounds (caprolactam, acrylonitrile, terephthalic acid, dimethyl phthalate, oxo-alcohols, acrylate MDI), which, however, because of the reduction in new funding was postponed until later.

## Imports rise more rapidly than domestic production

The relatively rapid increase in the consumption of chemical products in Yugoslavia up to 1974 was made possible by importation, which grew more quickly than the domestic production. In 1974 imports made up about 31.2 percent of the demand, in the next 3 to 4 years it was somewhat less because of restrictive measures. At the end of the 1970's and the beginning of the 1980's a great increase in imports resumed. In 1981 more than a third of the directly consumed chemical products was imported.

The production of chemical products became for reasons already known (limited resources) the object of the international labor apportionment. Accordingly, it is absolutely necessary to consider while discussing the possibility and the justification for the limitation of the importation of raw materials and industrial intermediates as well as the exporting of chemical products. In the beginning of 1980 there was a significant growth in exports which significantly improved the trade balance. In Table 6 the values of the chemical imports are presented according to their SITC nomenclature of the product groups.

Table 5: The consumption of the more important chemical raw materials in Yugoslavia (x 1,000 tons)

Products	1970	1975	1980	1981	1982
<u>Inorganic chemical products</u>					
Sulfuric acid	707	1,084	1,249	1,352	1,308
Ammonia	414	514	585	568	606
Chlorine	42.1	45.3	89.1	120.2	117.1
Sodium hydroxide	84.0	197.3	385.9	168.6	167.9
Sodium carbonate	142.5	192.6	202.4	222.7	265.2
<u>Organic chemical products</u>					
Ethylene	24.5	25.0	110.0	143.4	167.5
Propylene	9.3	8.9	13.6	54.2	71.1
Aromatics (BTX)	32.1	65.3	124.9	104.8	90.7
Methanol	21.6	40.9	71.7	69.3	60.2
Styrene	8.4	15.2	40.9	47.0	31.8
Vinyl chloride	24.3	42.4	146.5	198.6	193.5
Formaldehyde	33.2	69.1	121.6	122.1	121.5
Acrylonitrile	7.2	13.4	14.0	18.5	21.9

Table 6: Values for the imports of chemical products according to groups

Product groups	1975		1979		1980		1981		1982	
	\$1,000	%	\$1,000	%	\$1,000	%	\$1,000	%	\$1,000	%
Chemical elements and compounds	341,183	37.3	682,473	38.2	762,790	35.7	866,850	39.3	746,684	40.6
Mineral tar and chemical intermediates from petroleum and natural gas	5,900	0.6	9,448	0.5	10,377	0.5	8,080	0.4	8,238	0.4
Pigments, dyes, tanning agents	79,344	8.7	166,070	9.3	166,400	8.4	190,933	8.6	150,350	8.2
Medical and pharmaceutical products	72,534	7.9	106,619	6.0	106,787	5.4	128,289	5.8	80,191	4.4
Essential oils, personal hygiene products, detergents, and soaps	20,899	2.3	39,543	2.2	48,657	2.5	54,544	2.5	44,061	2.4
Fertilizers	49,247	5.4	72,744	7.1	121,331	6.1	151,727	6.9	137,961	7.5
Explosives, pyrotechnical products	2,080	0.2	22,585	1.3	27,440	1.4	17,546	0.8	6,790	0.4
Plastics, regenerated cellulose, and resins	160,589	17.5	358,105	20.0	365,920	18.6	361,139	16.4	302,170	16.4
Chemical substances and products not mentioned	102,179	11.2	195,403	10.9	214,480	10.9	248,058	11.2	189,611	10.3
Synthetic fibers	48,484	6.3	68,773	3.8	61,377	3.1	79,857	3.6	83,370	4.5
Synthetic rubber	37,711	3.6	64,795	3.6	84,473	4.3	99,608	4.5	90,051	4.9
Totals	915,150	100	1,786,558	100	1,970,032	100	2,206,531	100	1,839,477	100

## Prospective development of chemical production up to the year 2000

Consumption worldwide and in those countries that are comparable in their development with Yugoslavia, shows good agreement. That also applies to the rate of development during the past 15 years:

- chemical raw materials and agrochemicals
- petrochemical raw materials (olefins, aromatics, and the most important monomers)
- plastics, synthetic fibers, and synthetic rubber
- chemical intermediates as the basis of a part of the chemical processing industry (PAM, pesticides, pharmaceutical intermediates, adjuvants, etc.).

The Yugoslav dependence upon imports will be reduced significantly after the incorporation of the production lines under construction at that time (cf. Table 7) into the existing structures and improve their position in international trade.

From the organic raw materials (ethylene, propylene, butadiene, methanol, aromatics) would come a series of derivatives, such as, for example, LAB, TDI, acetic acid (under construction), synthetic rubber SBR (on line), or products for the projects in preparation: oxo-alcohols, terephthalic acid, acrylic acid, and acrylates, etc.

In 1977 in Yugoslavia 100.9 kg NPK per hectare of field surface was applied as fertilizers. For 1985 the application of 165 kg/ha is planned in contrast to 200 and 500 kg in other European countries such as Hungary, FRG, CSSR, Denmark, Holland, etc. In order to increase agricultural production here, by the year 2000 applications should reach 250-280 kg/ha. This would yield a growth of 3.5-4 percent.

If the calculations include 8.0 million hectares of agricultural surface and the present ratios of  $N:P_2O_5:K_2O$  are retained, agriculture needs about 2.0 million tons of fertilizer (nutrients). If the so-called "technical demand" for nitrogen and phosphorus as well as the demand for potassium is included also, then the result is a need for 1.6 million tons of ammonia, 750,000 tons of phosphoric acid ( $P_5O_5$ ), and 1.0 million tons of potassium salts (60 percent  $K_2O$ ). From such an increased fertilizer consumption there follows a demand for over 3.0 million tons of sulfuric acid.

The present consumption of chlorine, particularly for the production of vinyl chloride as well as bleaching agents for cellulose, should increase significantly because then the introduction of some new production lines must be considered too. Realistically a consumption of 350,000 to 400,000 tons of chlorine per annum is expected also along with the tied in 400,000-450,000 tons of NaOH per annum.

Then also the need for sodium carbonate (calcined soda) would have to be increased, which means that the present production must be doubled by the year 2000 in order to reach a level of 500,000 to 530,000 tons annually. Domestic needs could be filled by domestic production if a new production line would be set up.

In the case of petrochemical raw materials with regard to the specific consumption, which came to 18 kg per capita in 1981 and 1982, Yugoslavia trails significantly behind the developed industrial countries even though the new production lines in Zagreb, Pancevo, and Krk are on line.

The production requirement is estimated to be 70-80 kg per capita. This means that by the year 2000 the production would have to reach a level of over 2.0 million tons. At that time the largest portion would also belong to the olefins. It is estimated that in Yugoslavia the olefin short fall lies in an order of magnitude of 400,000 to 500,000 tons annually. In this case the operating production lines and those now in the final phases of development are considered as well as those which will be completed only after 1985.

For the production of methanol the completion of the production capacities of 200,000 tons annually (MSK Kikinda) would satisfy the needs of the domestic market, in which case the necessary exportation would also be realized.

In order to make this production possible by the year 2000, approximately 12.5 million tons of raw materials (about 67 percent inorganic, 22 percent organic, and around 11 percent other raw materials) would have to be guaranteed, which represents a tripling of the present consumption. The portion of the imported raw materials for the total consumption by the year 2000 would come to about 60 percent.

Table 7: Expected production of capacities now under construction

Producer	Products	Magnitude of capacity (1000 tons/ann.)	Production at 90% of capacity
INA Petrochemistry, Kutina*	Ammonia	452	416
	Sulfuric acid	500	450
	Phosphoric acid	165	148
	Carbon	42	38
HIP Pancevo	Ammonia	300	270
MSK Kikinda	Methanol	200	180
	Acetic acid	100	90

\*The production lines are in trial runs



## Possibilities for the substitution of imported raw materials and chemical products

An evaluation of the possibilities for the substitution of the imported raw materials for chemical production as well as for chemical products can be summarized as follows (10):

- The present requirement of this country for primary gasoline comes to about 1,150,000 tons annually. By 1990 the start up of the pyrolysis on Krk can be included. It will need about 1,200,000 tons annually of crude gasoline. This yields a total of 2,350,000 tons by the year 1990. The Yugoslav petroleum production of 4-5 million tons annually cannot fill this need, and so the olefin production remains permanently dependent upon imports.
- The utilization of natural gas in Yugoslavia serves above all as a raw material for the production of ammonia and methanol. In consideration of the production lines already in operation as well as of those to be completed in the coming years (1,407,000 tons annually of ammonia and 363,000 tons annually of methanol) with a production of 90% of capacity it can be expected that the minimum requirement in 1990 will come to 1.33 billion m<sup>3</sup>. Since the domestic natural gas yield is estimated to be 2.0-2.5 billion m<sup>3</sup> annually, this means that the total natural gas requirement of the chemical industry in Yugoslavia can be filled by domestic sources.
- The needs for phosphates, potassium salts, sulfur, borates, titanium dioxide, and halite will have to be partially or totally filled by foreign sources. Thus, the possibilities of utilizing the phosphate deposit at Bosilegrad must be actively investigated as well as the operation of the production lines for the production of refined sulfur (at this time three installations are under construction for the production of refined sulfur) and the opening of a new deposit site (Tetima on the slopes of Majevica).
- In the area of monomers only through substitution of the total importation of vinyl chloride, phenol, and TDI can changes be expected, i.e. with a reduction of imports by about \$60 million based upon the value of imports during 1982. It should be emphasized that some production lines for the production of the other monomers in short supply (styrene, caprolactam, acrylonitrile, dimethyl terephthalate) are planned; however it is uncertain whether or not this major program can be realized by the end of this decade.

In the area of the organic intermediate products, a group taking second place among the compounds in short supply, a significantly slow partial improvement can be expected. Namely only the operation of the production lines for the production of acetic acid and LAB is assured, which means a reduction of the imports by about \$14 million while a whole series of programs that are involved with the production of alcohols, their derivatives such as glycols, is postponed because of the delay in putting into effect of the third phase of the petrochemical complex on Krk (pyrolysis: ethylene, propylene, etc.)

- In the area of plastics a significant substitution of the imports can already be expected this year. The practical results are the greatest here. Based upon 1980 the production capacities in 1984 for PVC will be 141,000 tons greater, for PENG 70,000 tons, for PS 22,000 tons; also some lines for the production of 30,000 tons annually of propylene and 40,000 tons annually of SBR rubber or plastics, respectively, which had not been produced previously in Yugoslavia, were put into operation. If in addition the expansion of a series of newer lines for the production of synthetic fibers is considered (polyester, polyamide, polypropylene fibers), it follows that in comparison with 1982 plastics imports to the value of \$190 million will be replaced. Naturally this applies only under the condition that certain monomers in short supply but are needed for the full utilization of the production capacities, will be assured by imports, such as, for example, styrene, caprolactam, acrylonitrile.

- In the area of inorganic production a full substitution for the importation of ammonia, sulfur, and phosphoric acid can be really expected, in which case a saving of about \$35.5 million, based upon 1982 data, can be achieved.

From this brief presentation it follows that with good utilization of the existing production capacities even by 1985 imports could be reduced by \$300 million. After the elimination of some bottlenecks, by the end of the decade the exports can provide 80-85 percent of the funding for the imports of chemical products.

12446

CSO: 3620/352

END

**END OF**

**FICHE**

**DATE FILMED**

21 JUNE 85

